Vol. X, No. 8 August, 1934

66

THE JOHN CRERAR
AUG 18 1934

SOAP

SOAPS • CLEANSERS • INSECTICIDES • DISINFECTANTS
POLISHES • EXTERMINATING • SANITARY SUPPLIES

TERPINEOL PRIME NO. 1

The test of excellence

for a Terpineol is that soft, delicate odor suggesting fresh Lilac.

TERPINEOL PRIME NO. 1 passes this test with a sweetness and softness of odor exceeded by no other Terpineol in its price class.

The absolute permanence of TERPINEOL NO. 1 against caustic alkali—its resistance to fatty acids—its low price . . . recommend it as the ideal Terpineol for soaps.

GIVAUDAN
DELAWANNA INC.
80 Fifth Avenue, New York, N. Y.
Philadelphia Los Angeles Chicago Atlanta Cincinnati San Francisco Detroit Dallas Montreal Baltimore Havana New Orleans

in Your Sample Case THIS YEAR

Many jobbers, staggering to their feet after months of struggling with cut-throat soap competition, now find themselves faced with an equally difficult problem—that of determining which liquid toilet soaps will best stimulate sales in 1934.

To these jobbers Falcon says—"Here's a line of liquid toilet soaps whose label has always been a recognized quality safeguard to the buyer and a selling asset to the jobber. Here's a line of soaps made of the finest raw materials under strictest laboratory control. Here's a line that was handled by more jobbers in 1933 than in any previous year."

There is room for Falcon Liquid Toilet Soaps in your sample case for 1934. Whether it be Falcon 40% Concentrated Soap, Falcon 15% U. S. Government Standard Soap or any one of the many grades, you have a soap for every type of customer and pocketbook.

Build your 1934 business around Falcon. It guarantees satisfied customers and an upward moving sales curve. Send for our latest descriptive price list today.

NRA

EAGLE SOAP CORPORATION

HUNTINGTON INDIANA

NRA

Falcon Liquid Toilet Soaps

MADE BY THE MAKERS OF THE FAMOUS FALCON DEODORANT BLOCS AND CHALLENGER URINAL BLOCKETTES

Packaging in THE MODERN TEMPO

GOOD DESIGN and appropriate color treatment speak a language any buyer understands. There's something to be done for the most ordinary product which will make its package distinctive—make it say: "Take me home, I'm good." That's merchandising applied to packaging.

For the past 29 years The Continental Can Company has, with marked success, created modern, useful containers and rebuilt old types into new.

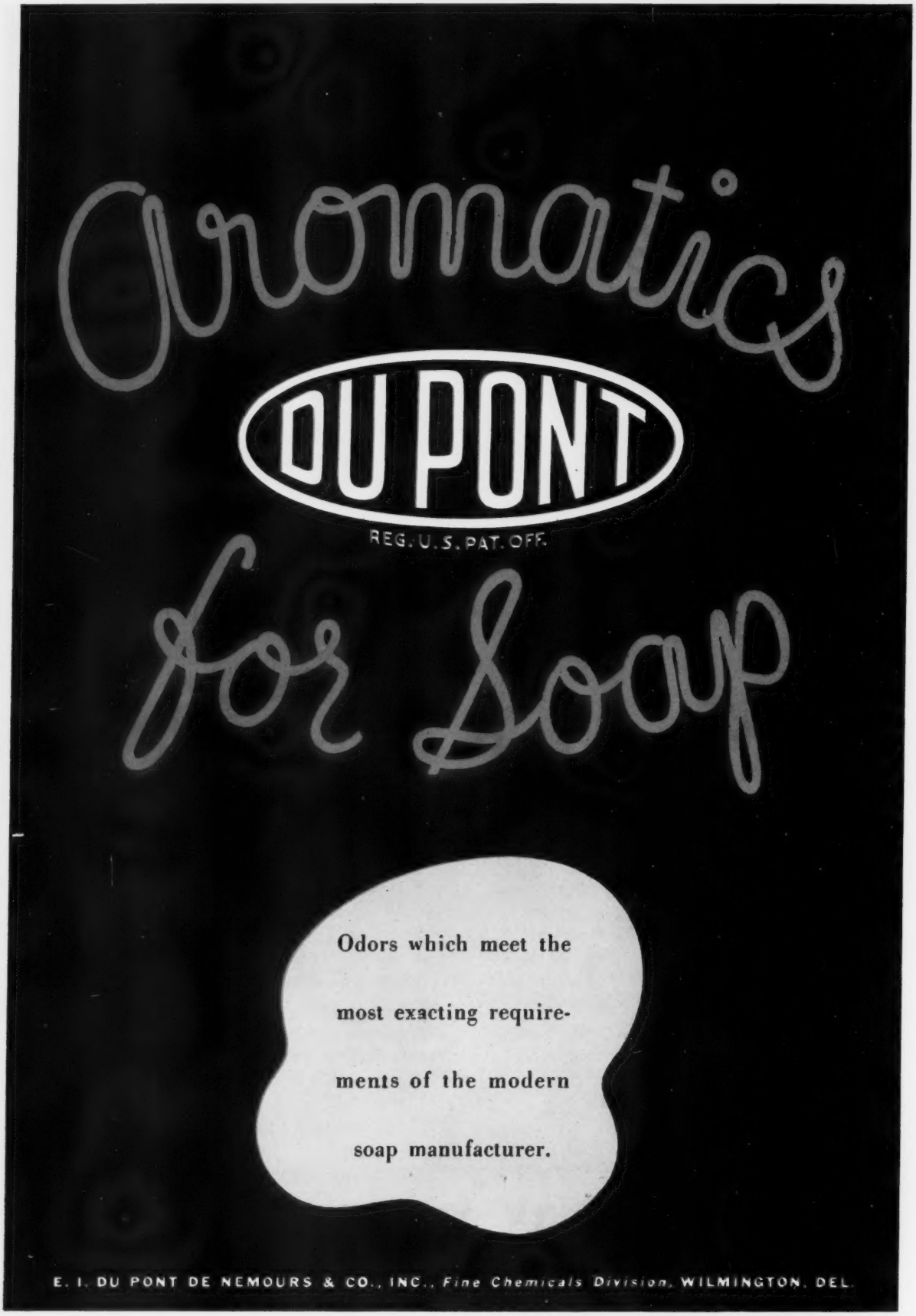
We haven't found any substitute for vigorous simplicity, nor for pleasing color contrasts, good visibility, designs which register on one's memory. These we believe to be fundamental—just as fundamental as convenience, protection and utility.

If you would really be interested in seeing what a Continental packaging analysis is like and how we would apply the above principles to your own product, why not write, wire or phone to our nearest sales office?

IT'S BETTER PACKED IN TIN

CONTINENTAL CAN COMPANY

NEW YORK CHICAGO SAN FRANCISCO


Aromatics
DU PONT
REG. U. S. PAT. OFF.
for Soap
Odors which meet the most exacting requirements of the modern soap manufacturer.
E. I. DU PONT DE NEMOURS & CO., INC., Fine Chemicals Division, WILMINGTON, DEL.

SOAP

Reg. U. S. Patent Office

Volume X
Number 8

August, 1934

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Published monthly on the 15th by

MacNAIR-DORLAND COMPANY, INC.
136 LIBERTY STREET NEW YORK, N. Y.

Subscription rate $3.00 per year. Foreign, except Canada, $4.00. Canadian, $5.00. Copy closing dates—7th of month of issue for reading matter and 25th of month preceding month of issue for display advertising. Entered as second-class matter, April 11, 1931, at Post Office, New York, under act of March 3, 1879. Mail circulation, July, 1934, issue 2,988 copies. Total distribution, 3,200.

ANNOUNCEMENT

SOAP has become a member of the A.B.C., that is the Audit Bureau of Circulations. The fact that SOAP has been accepted for membership in the A.B.C. is of real importance to every advertiser in the publication, as well as to every firm contemplating advertising.

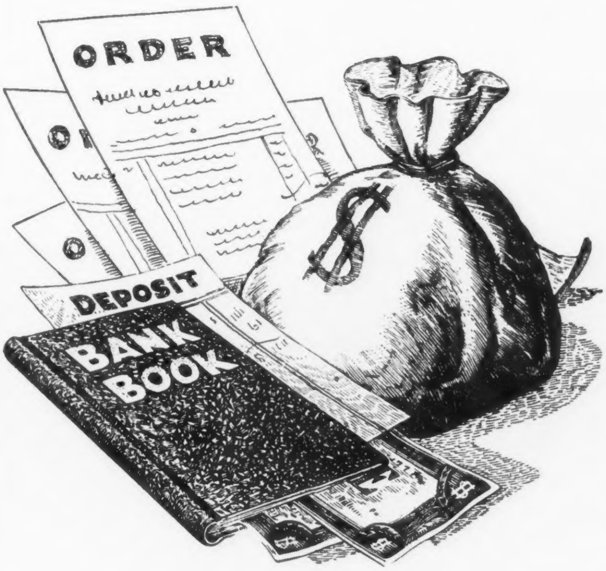
For a number of years, SOAP has proved the quantity of its circulation by attaching photostatic copies of Post Office mailing receipts to all advertising invoices. It now goes a step further and proves quality, as well as quantity, with A.B.C. reports.

The requirements of the A.B.C. are exacting. Its audits are unbiased. They tell the advertiser exactly what he is getting in circulation, quantity and quality.

It is significant that only one other trade publication in addition to SOAP in the entire manufacturing field of soaps, chemicals, chemical specialties, drugs, sanitary products, cosmetics, etc., is a member of the A.B.C. All are eligible for membership at practically nominal cost if they can meet the requirements.

MacNAIR-DORLAND COMPANY, Inc.
Publishers of SOAP

Do *you* want a PARTNER.....?



If your present sales and profits are entirely satisfactory to you, then this offer may not be of interest.

On the other hand, if you can stand more business NOW, here is a suggestion that actually works and has proven itself again and again.

Just add a few suitable long profit products to your line that you can sell to your present customers *without going to the bother and expense of investing in machinery, stocks of raw materials, labels, etc.*

We will take care of all that for you, —and supply you with high grade finished products at prices so low that it would scarcely pay you to make them up yourself.

In addition, we have attractive imprint labels ready for your name and address.

OUR HALF
Making up for you high grade finished products at minimum cost.

YOUR HALF
Selling a few extra profitable items to your present trade and watching your sales jump.

Many concerns are actually *making more money today than ever before.* Clifton Products can aid you, too.

CLIFTON CHEMICAL CO., INC.

CLIFTON BUILDING

MEMBER NATIONAL ASSN. INSECTICIDE AND DISINFECTANT MFRS. INC. INC. 1914

246 Front Street
New York City

Quality Sanitary
Products Since 1912

TEAR OFF HERE

Clifton Chemical Co., Inc.
246 Front Street, New York City.

Your plan is worth looking into. The items checked would probably help increase our sales. Please quote:

- ☐ Semi-Castile Liquid Soap
- ☐ Foamwel Liquid Soap
- ☐ Liquid Soap Base
- ☐ Liquid Soap Dispensers
- ☐ Cresolene Disinfectant
- ☐ Liquid Floor Oil
- ☐ Pine Scrub
- ☐ Deodorizing Cakes
- ☐ Deodorizing Blocks
- ☐ Deodorizing Sprinklets
- ☐ Wall Containers
- ☐ Metal Polish
- ☐ Spot Remover
- ☐ Moth Frost
- ☐ Rubless Wax
- ☐ Furniture Cream
- ☐ Insect Killer
- ☐ Coal Tar Disinfectant
- ☐ Pine Disinfectant
- ☐ Theatre Spray
- ☐ Shampoo Liquid and Base

(NAME) ....

(ADDRESS) ....

Use This Filler For *Any* Filling Job

So versatile it will fill practically *any* kind of container with almost *any* kind of material, the Stokes & Smith American Filler, with Gross Weight Scale, comprises four different machines in one single unit. These are:

1. *A gross weight scale with auger feed.*
2. *A volumetric filler measuring material by the volume of the package.*
3. *A volumetric filler measuring material by the turns of the auger, a very precise way for the smaller quantities.*
4. *A packing machine to compress the material into packages.*

Changing from one type of container to another, even from any paste to free-flowing powder, is only a few minutes' work.

May we arrange a demonstration for you?

STOKES & SMITH Co

PACKAGING MACHINERY PAPER BOX MACHINERY

4912 Summerdale Avenue, Philadelphia, U. S. A.

British Office: 23, Goswell Road, London, E. C. 1

not only

IMPORTATION

from an exclusive source internationally famous

not only

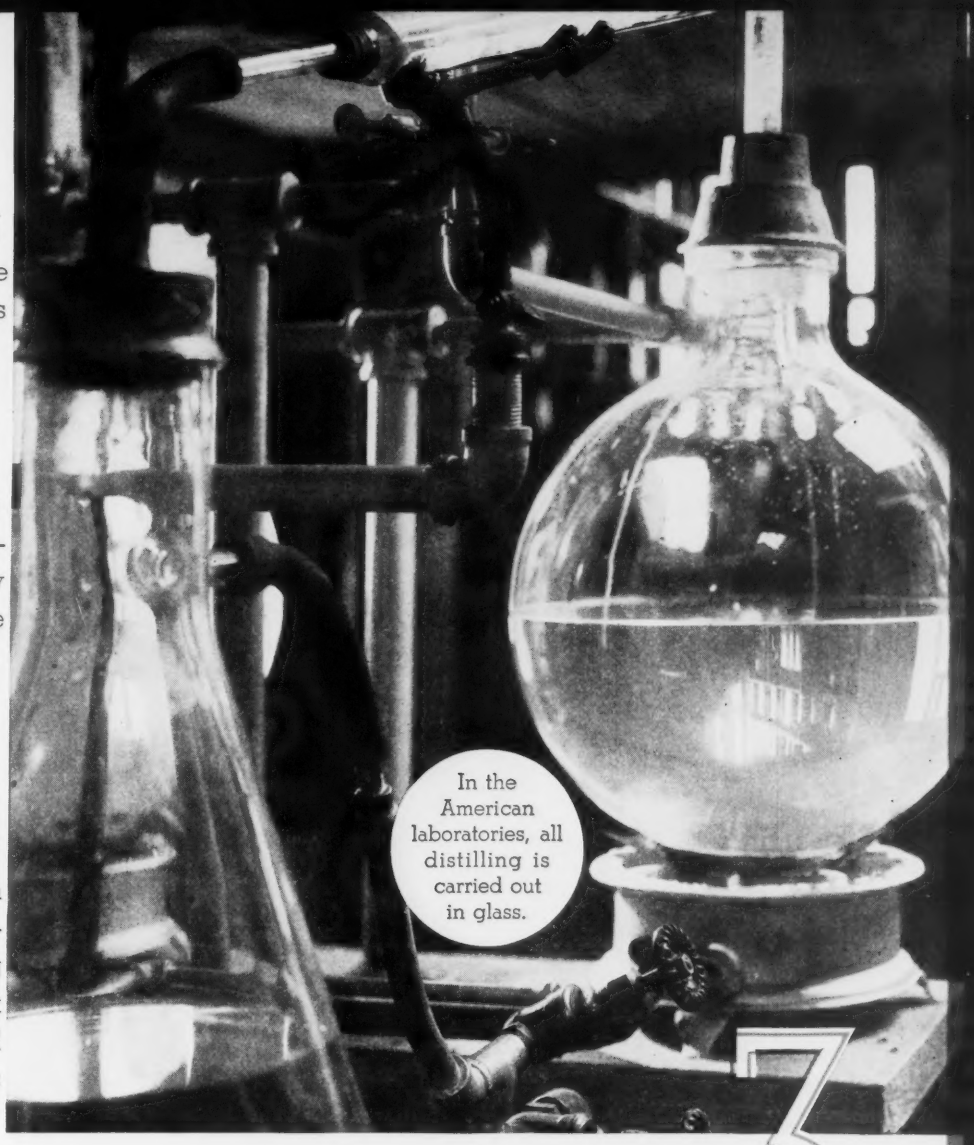
MANUFACTURING

in its own American laboratories, with Guy Verley as liaison chemist from the European house

not only

COMPOUNDING

of our nationally known bases, including confidential custom compounding for a number of important American cosmetic and perfume manufacturers



In the American laboratories, all distilling is carried out in glass.

but the COMBINATION OF ALL 3

has given the house of Albert Verley, Inc., its unique place in the field of aromatics. ○ Recent developments by the staff of the American laboratories have been especially notable. A case in point is **Nerol for Soap,** a true Nerol produced by a special process. ● Formerly available only at a price prohibitive except for the most expensive perfumery products, it is now offered at a **modest cost** within the means of soapmakers. A new, appealing note in building up Rose or Neroli compositions; stable, will not cause discoloration. ● Write for samples. ● **Albert Verley, Inc.,** David A. Bennett, President, 11 East Austin Ave., Chicago; L. J. Zollinger, Vice President, 114 East 25th St., New York. Exclusive American representatives for ETABLISSEMENTS ALBERT VERLEY, 8, Quai de la Marine, Isle St. Denis, (Seine), Paris, and S. A. TOMBAREL FRERES, Grasse, France. Pacific Coast Distributors: Mefford Chemical Company, 1026 Santa Fe Ave., Los Angeles, Calif.

★ ★ ★ *Albert Verley* ★ ★ ★

AROMATICS

D & O

"THE STANDARD OF QUALITY"

Established 1798

Our products can be relied upon. They have stood the test for over 135 years and are sold at lowest possible prices.

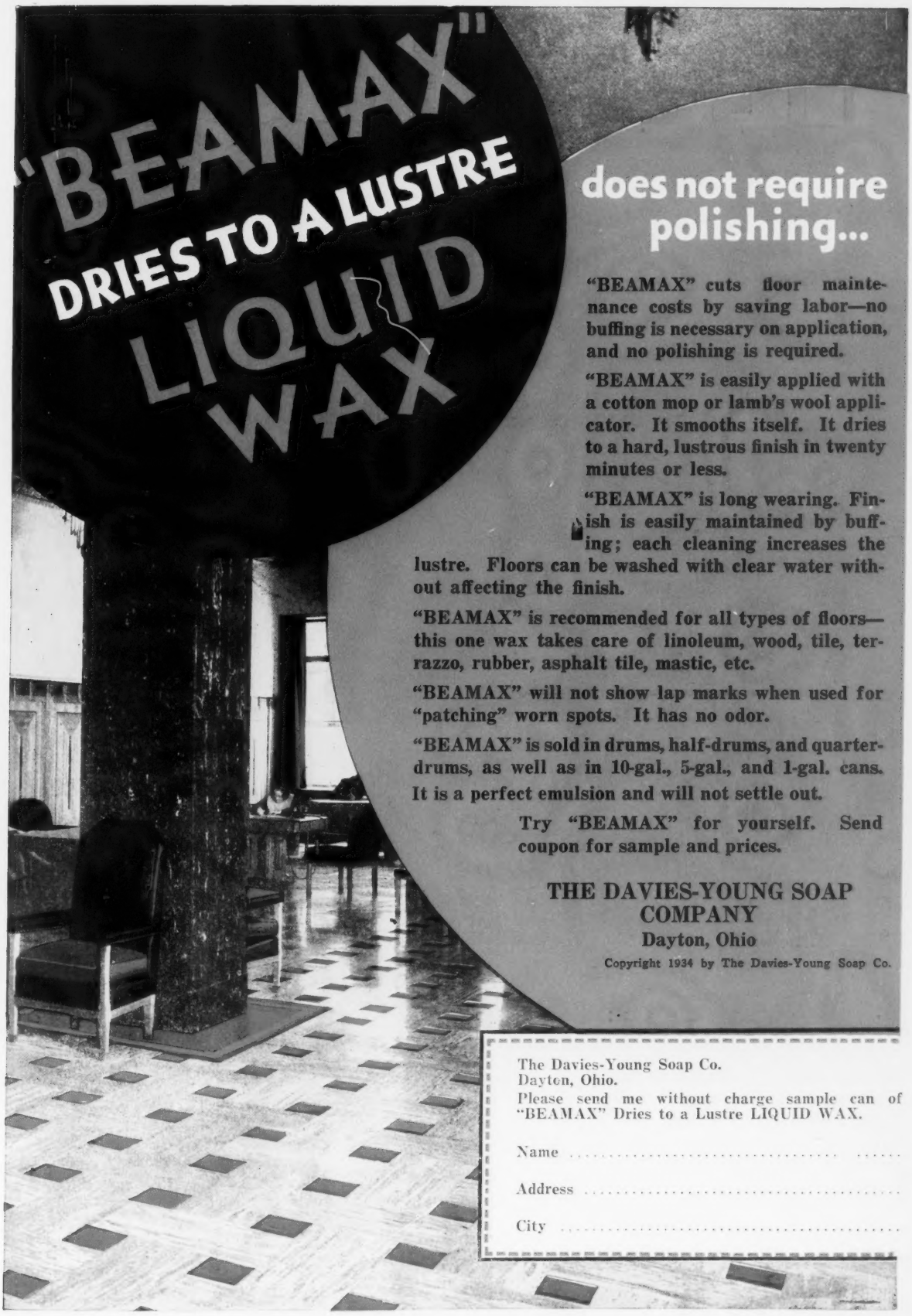
DODGE & OLCOTT COMPANY

180 Varick Street **New York, N. Y.**

Branches:

CHICAGO — ST. LOUIS — LOS ANGELES — BOSTON — PHILADELPHIA

"The integrity of the house is reflected in the quality of its products".



does not require polishing...

"BEAMAX" cuts floor maintenance costs by saving labor—no buffing is necessary on application, and no polishing is required.

"BEAMAX" is easily applied with a cotton mop or lamb's wool applicator. It smooths itself. It dries to a hard, lustrous finish in twenty minutes or less.

"BEAMAX" is long wearing. Finish is easily maintained by buffing; each cleaning increases the lustre. Floors can be washed with clear water without affecting the finish.

"BEAMAX" is recommended for all types of floors—this one wax takes care of linoleum, wood, tile, terrazzo, rubber, asphalt tile, mastic, etc.

"BEAMAX" will not show lap marks when used for "patching" worn spots. It has no odor.

"BEAMAX" is sold in drums, half-drums, and quarter-drums, as well as in 10-gal., 5-gal., and 1-gal. cans. It is a perfect emulsion and will not settle out.

Try "BEAMAX" for yourself. Send coupon for sample and prices.

THE DAVIES-YOUNG SOAP COMPANY
Dayton, Ohio

Copyright 1934 by The Davies-Young Soap Co.

The Davies-Young Soap Co.
Dayton, Ohio.
Please send me without charge sample can of "BEAMAX" Dries to a Lustre LIQUID WAX.

Name .....

Address .....

City .....

HEPTYLLYS B

is rapidly being recognized as one of the outstanding aromatic chemicals now being offered to the perfume and soap manufacturers. The reasons for this recognition are that Heptyllys B has a definite, flowery note—a lasting odor—blends readily with other aromatics in compounds — has a greater odor volume than other aromatic chemicals in the same price and odor class—and will not discolor.

Heptyllys B is our trade name for a purified Alpha-Amyl-Cinnamic-Aldehyde.

Upon request we will be glad to submit samples of Heptyllys B.

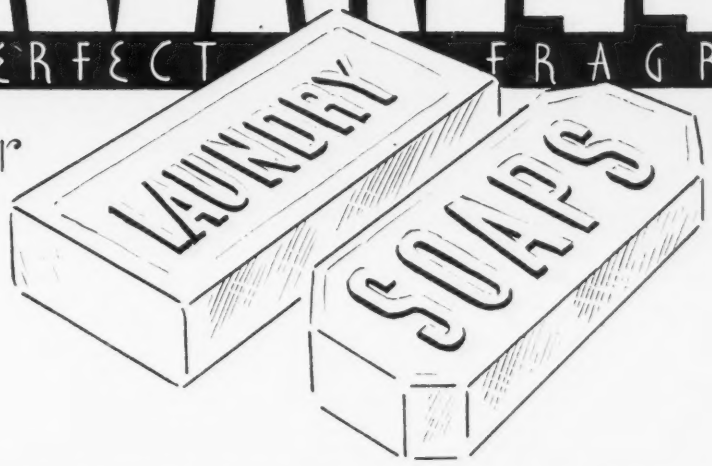
The Naugatuck Chemical Company

Aromatics Division

1792 BROADWAY **NEW YORK, N. Y.**

JAVANELLA

THE PERFECT FRAGRANCE for LAUNDRY SOAPS



●SOAP Makers who want to increase their sales cannot do better than investigate JAVANELLA, a soap perfume base with numerous advantages. It completely eliminates the odor of the fatty substances—it imparts an appealing fresh, clean lasting scent—

It is ALKALI PROOF
—and costs always ***LESS*** *than* CITRONELLA

- JAVANELLA *is not subject to market fluctuations . . .*
- WRITE FOR SAMPLES *and* QUOTATIONS

FELTON CHEMICAL COMPANY, INC.

603 JOHNSON AVENUE, BROOKLYN, N. Y.

AROMATIC CHEMICALS — NATURAL ISOLATES — PERFUME OILS — ARTIFICIAL FLOWER & FLAVOR OILS

Stocks carried in following cities:

Chicago, Ill.
1200 N. Ashland Ave.

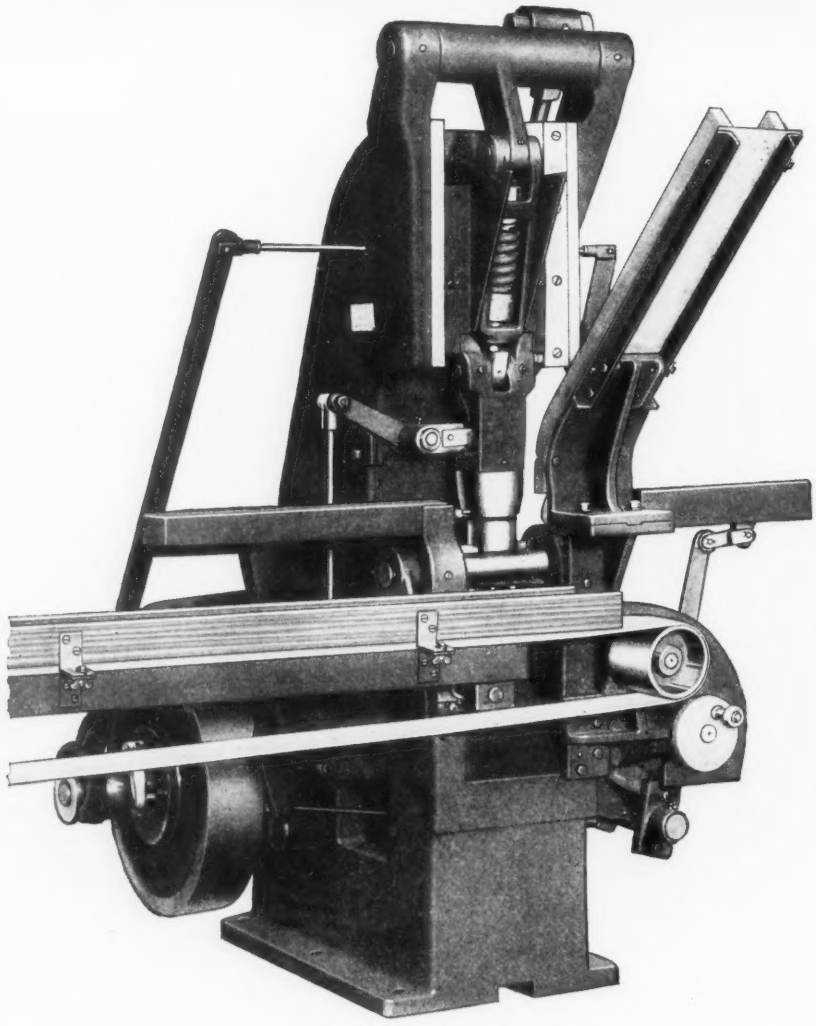
New Orleans, La.
ROBERT E. FELTON
Balter Bldg.

St. Louis, Mo.
KEIFFER SALES
& ADV. SERVICE
1014 Locust St.

A COMPLETE SERVICE FOR THE WEST
FELTON CHEMICAL CO., INC.
515 So. Fairfax Ave.
Los Angeles, Calif.

We sent the first Pin Die Press to Societe Cadum twelve years ago, and a little later seven additional ones. Last week we received an order for four more from the same concern.

"Savon" Cadum, one of the most popular toilet soaps in France, must have a perfect finish to meet the exacting demands of the World's Capitol of luxury and fashion, so its makers come to America for their presses.



TYPE G
Toggle Operated Press for Pin Die Work

American soap manufacturers may have, without paying duty or long transportation charges, the best Toilet or Laundry Soap Presses on earth.

JONES New Toggle Operated Presses have worked a revolution in the art of pressing soap. They make far better looking cakes and eliminate delays and spoilage.

It would pay you to discard all old model presses for

JONES TOGGLE OPERATED PRESSES

R. A. JONES & COMPANY, Inc.

P. O. BOX 485 • CINCINNATI, OHIO

The Standardized *Constant Motion Cartoner* packages bottles, jars, tins, collapsible tubes and many other articles. It folds direction sheets and inserts them and corrugated board liners with the loads

NRA CODE GRAPHIC ARTS INDUSTRY 1934

SOAP

Volume Ten Number Eight

EDITORIAL

ALTHOUGH the value of American soap production in 1933 was almost twenty-three per cent below that for 1931, according to the U. S. Bureau of the Census, the tonnage decline was only around six per cent. The explanation, of course, lies in the sharply lower prices at which soaps sold in 1933, approximately twenty per cent under 1931. Those soap makers who have wondered how their individual figures compared with the industry as a whole, now have the answer. That these production figures are substantially correct is borne out by a check of the oil and fat consumption figures for the soap industry. It is our belief that there is much incidental soap production of the country which the Census Bureau is missing in its totals, but this does not change substantially the comparative value of the figures.

The striking reduction in soap values in 1933 is further emphasized by the fact that there were material tonnage increases in the output of toilet soaps, chip and flake soaps, and cleansers and scouring powders. Even these items which sold in larger volume netted the industry less in dollars than in 1931. Following the trend of recent years, bar laundry soap dropped off in 1933. Not only was the tonnage down some hundred thousand tons, but the price per pound was materially lower than in 1931. Even so, the laundry bar continues to be the single largest seller, making up at least half of the soap output of the country.

Since the figures for 1933 were compiled, soap prices have turned upward and now stand at considerably higher levels. Unless the economic scheme of things is completely upset before the year ends, the indications are that even higher prices must come.

DURING the last session of Congress, a certain member of the House announced to the world in general, and to a committee in particular, that soap prices had been maintained unchanged at high levels through the depression even though the cost of raw materials had gone down such-and-such a percentage. Apparently, the committee, Congress, and most everybody accepted this without much ado. Lucky soap industry! Still getting 1929 prices and raw materials are away down. No wonder half of the butchers and all of the bakers in Christendom dropped in on us to find out how, when and where to go into the soap business. If we had had six soap plants to sell right then, we could have sold them all. We protested in a feeble sort of a way against the remarks of this member of the House at the time, because we knew that he had sounded off on the wrong key. Nevertheless, it is an even bet that ninety per cent of the populace, including all the ladies' aid societies and other consumers' leagues, still thought they were being robbed by the big soap barons. And now comes the census report for 1933, which upon being translated, indicates that soap prices were about twenty per cent lower in 1933 than they were in 1931.

—— • ——

PURCHASES of oils and fats on the whole over the past three months have probably been the smallest in any similar period during the past decade. As far as we can determine, the soap industry practically withdrew from the market for some two months following the signing of the Revenue Act containing the three-cent tax on leading imported soap oils. Soapers were apparently coasting along on material al-

ready finished or partly processed prior to the adoption of the tax. Many soapers apparently just could not bring themselves to the point of paying the tax on any oil until they were absolutely compelled to do so. The idea appeared to be about that something might happen and any tax-paid oil on hand would be so much dead wood. It has naturally been very hard to pay six or seven cents for oil which formerly cost only three of four. Now we have had an upward movement in the tallow market and other oils seemingly are adjusting themselves in a more normal ratio. Reports that livestock shipped from the drought areas are extremely low in fat are also heard. The undertone of the fat and oil market seems firm, apparently awaiting more active buying which it is believed is inevitable in the near future. That any purchasing might push prices up out of proportion to the size of the movement is altogether possible under present conditions.

—— ♦ ——

THE editor of a well-known advertising magazine telephoned to us a week ago to find out why all the soap companies were offering everything from baby-grand pianos to life insurance annuities in their sales campaigns just now. Why the big push to soap sales? Is the industry cluttered up with large excess stocks of soap? Are they cutting prices again? These and a dozen other inquiries were placed before us. We mentioned that in our opinion the industry did have a case or two of extra soap on hand which it might like to sell, and that this soap was probably made in the big rush back in February, March and April to beat the excise tax. We also hazarded the guess that it might not take as long as expected to cut down the soap stocks on hand, particularly in view of the limited manufacturing operations in some quarters since last May 10th or thereabouts.

—— ♦ ——

ALTHOUGH the regulations covering the payment of the three-cent excise tax on coconut, palm, and other imported oils, were not ready for distribution on July 31, the Bureau of Internal Revenue refused to grant an extension of time beyond that date for payment of the tax covering the months of May and June. The excise tax became law over three months ago, and as yet no regulations have been issued. At the same time, the taxpayer must fill out his tax forms in duplicate and pay the tax to the nearest revenue office. If he makes mistakes, the Bureau of Internal Revenue may not be harsh with him,—if they see fit.

It is understood that "first processing" is considered any operation in which the oil is treated in any way, even cleaning and washing. In this case, much oil except that brought in direct by large soap makers, will be taxable before it ever reaches the soaper. The tax will appear then as an item on the invoice for the oil, and it will be the money of the oil man, and not the soap maker, which is tied up in the tax. In this case,—and we understand this is the line along which the Bureau is writing its regulations, —most soap makers will be freed of the bother of calculating and paying the tax. It will be included in the cost of the oil as received.

—— ♦ ——

WHERE a liquid soap is being made from coconut oil on which the three-cent excise tax has been paid or must be paid, the price of the twenty per cent grade soap should be advanced a minimum of five cents per gallon to cover the tax alone. If there are still liquid soap manufacturers who feel that they can absorb the tax, possibly the size of the figure representing the cost of the tax will deter them. Once more, we want to urge soap makers in all branches of the industry to add the cost of the tax in full to their prices now irrespective of what other adjustments may be made from day to day in quotations.

—— ♦ ——

IN the State of New Jersey, the ban which the State Board of Pharmacy has placed on the sale of certain poisonous and corrosive products in grocery, hardware, and all stores except in those operated by a licensed pharmacist, has raised a storm which grows larger daily. The ban reaches out to include household ammonia, drain pipe cleaners, household lye, disinfectants, insecticides, and other substances. If the State Board insists on enforcing the law literally, we believe that it is going to raise a furore which may run into some nasty legal and political entanglements.

—— ♦ ——

There not being enough oils and fats on the world markets already, four whaling vessels are operating this summer off the Newfoundland coast. The last we heard, there was still something in excess of 300,000 tons of whale oil unsold in Europe.

Germicidal Detergents

The Synergistic Action of Soaps on the Germicidal Efficiency of Alkalies

By A. R. CADE and H. O. HALVORSON*

DURING the past few years we have been making a systematic survey of germicidal compounds to see whether we could find some which would be active in alkaline solutions. We believe there is a definite need for such compounds. In food manufacturing or food processing establishments, it would be highly advantageous to have a preparation which would act as a detergent and as a germicide at the same time (1). The cleaning and sterilization of equipment could then be carried out in one operation. Where this is necessary one is at present limited to the use of caustic soda in solutions of 3 per cent or above. There are many disadvantages connected with the use of this chemical (2). In the first place, it cannot be considered a very efficient detergent, and in the second place, it cannot be used in solutions which will come in contact with the hands or clothing of the workers. Furthermore, caustic soda has a tendency to glue the bacteria to the equipment which is being cleaned, and unless the solution is strong enough to kill the organisms, they remain alive. It is evident that caustic soda is not practicable in restaurants, hotels, soda fountains, etc., where equipment must be washed by hand. In such places, it has been advocated, in recent years (3) that two separate operations be performed: cleaning by means of a good detergent, and sterilization by the use of hypochlorites or other chlorine derivatives. When properly controlled, this method will give satisfactory results, but the process is by no means fool-proof, and when employed by a layman is more likely than not to give unsatisfactory results, particularly since chlorine compounds are unstable (4) and quickly inactivated by organic matter. Another recommendation is to follow the cleaning operation by steam sterilization, but this involves considerable expense, and also considerable breakage where glassware is being washed.

We have felt that for the protection of public health there is needed the development of compounds which are in themselves germicidal and which are efficient detergents. This feeling is no doubt shared by a large number of public health workers. With this problem in mind, we made a systematic study of the germicidal efficiency of a group of compounds in alkaline solutions. At the outset we felt that it was probably impossible to find a detergent with sufficient germicidal power to kill the spores of saprophytic organisms, some of which are extremely resistant as indicated by the work of others. After being subjected to desiccation, as is usually the case with those found on equipment these spores are probably even more resistant than has been indicated by published results. As far as public health is concerned, however, we believe that there are but few instances where it would be necessary to kill such spores. What is primarily needed is to kill the pathogenic organisms. To our knowledge, the most resistant of these are the Staphylococci (5) and the acid-fast Mycobacteria. Since the latter are not easy to cultivate, and grow but slowly, they are not suitable for routine studies. We therefore selected the Staphylococci as test organisms for this series of tests. A substance germicidal for the Staphylococci should also be germicidal for most pathogenic organisms. We realize of course that some compounds show marked specificity (6) for certain organisms, but these are the exception rather than the rule. In any event, the detergent would have to be tested against many organisms before a final conclusion could be drawn.

In reviewing the literature on germicides and methods of testing them, we find much discrepancy not only in the technic recommended but also in the results obtained by different workers using the same technic (7). Much of this is undoubtedly due to differences in the resistance of the organisms used. However, we believe that a good portion may also be due to the error of random sampling, which appears not to have been considered by workers in this field. Our technic is designed to overcome the effect of this error as far as possible. A review of the literature leads one to believe that the most reliable technic thus far recommended is the Reddish or the Food and Drug Administration (F.D.A) test (8). Briefly, this is carried out as follows:

The test organism is first cultivated on a standard medium consisting of Liebig's beef extract, Armour's peptone, and sodium chloride, adjusted to a pH between 6.8 and 7.2. It may be used as a liquid or solidified by the addition of 1.5 per cent agar. An organism cultivated on such a medium for a period of time, with daily transfers, seems to become quite uniform in its resistance.

*Department of Bacteriology and Immunology, University of Minnesota, Minneapolis.

Of the 24 hour culture, 0.5 cc. is added to 5 cc. of the solution to be tested. At the end of 5, 10 and 15 minute periods, standard loopfuls are removed from the test solution and transferred to nutrient broth, which is then incubated for 24 hours. The tubes which show growth are then noted. If no growth is obtained, it is assumed that the culture had been sterilized.

It is evident that with this technic, it is difficult to determine the limiting dilution which will kill the organisms in the test period. The investigator attempts to find two limiting concentrations, one of which permits growth and the other of which gives sterile results. The latter is then taken as the limiting germicidal strength of the chemical. It is obvious that the limiting concentration of a chemical must kill nearly all the organisms. When loopfuls are removed from such a suspension, it is a matter of chance whether sterile or fertile loopfuls are obtained. Consequently, of two investigators running the same test, one might report positive and the other negative results. A single investigator might well experience the same discrepancy on repeated tests. The literature indicates that most people who have been making tests of this kind have assumed these discrepancies to be due to variations in technic, whereas in most cases they are probably due to the error of random sampling.

TO OVERCOME such discrepancies, as far as possible, we inoculated the test loopfuls into molten agar in pour plates rather than into liquid medium. Thus we could count the number of surviving organisms, and get a measure of the degree of killing when the sample removed was not completely sterile. This is not possible with the Reddish technic, since one cannot tell, from observing growth in broth, whether the inoculum contained 1 or 100 organisms. By plating the test loopfuls, it is comparatively easy to determine the limiting concentration of a chemical which will act as a germicide in the specified length of time. With increasing concentration one observes a decreasing count, and it is an easy matter to find the concentration which is on the border line. In our work, therefore, we have modified the Reddish technic to the extent that the loopfuls are inoculated into molten agar rather than broth, and our results are given in terms of the number of colonies appearing on the plates, which is a direct measure of the number of organisms that survived. The details of the technic are as follows:

As test organism we used the Insecticide Board strain of *Staphylococcus aureus*, the stock culture of which was maintained on ordinary nutrient agar stored at room temperature and transferred to fresh slants every 60 days. The test cultures were grown on nutrient broth, transferred every 24 hours, and incubated at 37.5°C. After the cultures had grown on liquid medium for at least two weeks, their resistance became fairly uniform, providing the age of the culture tested was between 20 and 24 hours. Some investigators have recommended that cultures to be tested should first be filtered through paper in order to remove clumps, thereby giving more uniform results. It has been our experience that this is not accomplished. At the same time, filtering seems to lower the apparent resistance of the organism. Instead of filtering, we shook the broth tubes vigorously, and allowed them to stand for ten minutes so that the heavier particles could settle. The medium for the growth of the test organism was made in accordance with the recommendations for the Reddish test, and the nutrient agar used for the final plates was of the same composition except that 1.5 per cent agar was added. The exact procedure was as follows:

> Five cc. of the disinfectant to be tested were placed in a sterile test tube, which was held in a rack at an angle of approximately 30° in a water bath maintained at the desired temperature, ± 0.1°. When the material in the test tube had reached the same temperature (usually 5 minutes were allowed), 0.5 cc. of the broth culture was introduced. The tube was shaken to mix the contents thoroughly, and immediately placed back in the rack. At the end of the desired time interval, a sterile 4 mm. wire loop was introduced into the mixture, carefully withdrawn, and immediately introduced into a tube of molten (43-45°) sterile nutrient agar. This agar tube was rotated between the palms of the hands to insure uniform mixing of the subculture material. The tube was then flamed and its contents poured into a sterile petri dish. After solidifying, the plates were inverted and placed in the incubator at 37.5°C. After 48 and 72 hours, the colonies were counted and recorded. A figure of 10,000 + in the tables indicates that an exact count was impossible, but the number of colonies exceeded 10,000. The counts above 10,000 were obtained by plating several dilutions of the initial subculture.

WE HAVE found that the resistance of the test organism may vary from time to time. In such cases, it is usually less than would be expected, although in a few instances the organisms developed a very high resistance. We have not been able to determine the cause of such sudden changes. In order to avoid, as far as possible, getting false results by using organisms of unusually high or low resistance, we tested each culture against a standard such as phenol. If the temperature of medication to be used with the unknown germicide was 20°C., we used phenol solutions of 1-60, 1-70, and 1-80. When 37.5°C. was the temperature of medication, we used phenol strengths of 1-80, 1-90, and 1-100. With normal cultures, the count in the test loopful removed after 5 minutes in 1-70 phenol was between 150 and 550. Likewise, at 37.5°, the loopfuls removed from a 1-100 dilution of phenol after 5 minutes should show counts between 100 and 500. If the counts did not fall between these limits, the cultures were considered abnormal, and the results obtained with those particular cultures were discarded.

It must be obvious to anyone familiar with the theories of random sampling that one cannot expect to get the same counts in loopfuls removed from the same solution, even though the culture is normal. Suppose that there is present in the test solution an average of 300 organisms per loopful. By the laws of chance, some of the loopfuls removed will contain considerably less than 300 organisms, while others will contain considerably more. This particular problem has been studied in detail, and the results are presented in a series of papers by Halvorson and Ziegler (9). As a general rule, it is safe to state that with a technic of this type, for any count above 100, two results must differ by more than one-half order of magnitude before they can be considered as significantly different. For counts of less than 100, the difference must be even greater than an order of magnitude before the results can be regarded as significantly different. Thus, in counts obtained by this technic, one cannot conclude that a count of 1 is significantly different from a count of 50, nor is a count of 100 to be considered significantly different from a count of 400. This fact must be kept in mind in examining the data to follow, because the tables given here represent typical sets of data and not averages obtained from a large series. Certain discrepancies may appear in any one set of data. These are not due to errors in technic but rather to the error of random sampling.

The following table I gives typical results with a standard phenol solution and the Insecticide Board strain of Staphylococcus aureus. Table II presents a series of plate counts obtained with 1-70 phenol at 20°C., and 1-100 phenol at 37.5°C. These data are included to emphasize the effect of the error of random sampling upon the results obtained.

Table I.

A Typical Set of Data Using Phenol Control

	Counts		
Phenol dilution (20°C.)	5 *min.*	10 *min.*	15 *min.*
1-60	3	0	0
1-70	350	100	20
1-80	1200	600	300
Phenol dilution (37.5°C.)			
1-80	2	0	0
1-90	202	18	0
1-100	420	170	60

Table II.

A Series of Control Counts Obtained with Standard Phenol Solutions

1-70 *phenol*		1-100 *phenol*						
5 min. at 20°C.		5 min. at 37.5°C.						
600	350	450	100	120	200	450	300	350
550	300	250	450	110	200	400	105	250
500	300	300	150	300	250	650	200	145
650	300	200	250	100	100	500	250	110
150	160	450	500	160	200	450	350	200
125	250	350	650	200	100	650	180	180
300	150	450	280	500	800	160	350	250
600	150	650	600	250	100	250	360	300
350	500	500	800	200	250	200	250	250
350	240	550	250	250	450	480	300	460
350	450	480	200	500	450	185	100	500
350	100	350	160	700	200	165	450	350
550	300	300	550	450	200	130	350	100
550	240	450	500	450	250	450	180	650
350		450	220	195	300	250	180	600
350		300	100	350	250	110	300	250
		250	350	500				
Average: 348		Average: 322						

IN OUR survey we investigated, to the best of our ability, all the compounds that are known to have germicidal properties. These were tested in solutions in which the pH was in excess of 11. Under these conditions practically all the known germicidal substances were shown to be of little value for use in a detergent. Rather than burden the reader with numerous tables giving negative results, we wish simply to list those compounds which were found to be inadequate.

Phenols and their derivatives begin to lose their germicidal efficiency at a pH of about 10. The loss became very marked at a pH of 11 or 12. (10). This seems to be due to the formation of sodium salts which have a much lower germicidal power than the compounds from which they are derived. The inorganic mercury salts are not suitable in alkaline solutions because of the low solubility of the hydroxide. We find that the germicidal efficiency of the organic mercury salts decreases, even though there is no apparent precipitation. Since most of these mercurials are derivatives of phenol, the loss of germicidal power may be due to the same phenomenon that weakens the latter. There are a great many acids which are germicidal, but under conditions in which their salts are formed, they are practically inert. (11).

Chlorine and chlorine compounds such as hypochlorites seem to retain their germicidal properties on the alkaline side much better than the other compounds we investigated. However, hypochlorites, or organic chlorine derivatives such as chloramine-T are not stable in solutions of high pH. They deteriorate quite rapidly in alkaline solution (12) or when mixed with alkaline powders such as trisodium phosphate, sodium metasilicate, or caustic soda. Certain mixtures of hypochlorites and trisodium phosphate may be highly germicidal immediately after mixing, but this property may be lost completely in a comparatively short time. A few such mixtures seemed to retain their germicidal power for several weeks. We have not been able to determine why some mixtures deteriorate rapidly and others are fairly stable. It may be due to the presence of small amounts of impurities in some of the alkaline powders used. Nevertheless, this instability would appear to render the hypochlorites and organic chlorine derivatives impractical for admixture with detergents.

The basic dyes are more germicidal on the alkaline than on the acid side, and some of these, such as crystal violet, are fairly efficient germicides in alkaline solutions. (13). However, the dyes exhibit marked specificity that they cannot be relied upon as general germicides. They seem highly toxic for Gram positive organisms, but are relatively inert for the Gram negative bacteria.

We also investigated a series of oxidizing agents such as peroxides, permanganates, and dichromates. In alkaline solutions, these, too, were either so un-

(*Turn to Page* 41)

COLUMBIA

SODA ASH
•
CAUSTIC SODA
•
MODIFIED SODAS
•
CALCIUM CHLORIDE

☆

THE COLUMBIA ALKALI CORPORATION

Executive Sales Offices

EMPIRE STATE BUILDING, NEW YORK

Branch Sales Offices

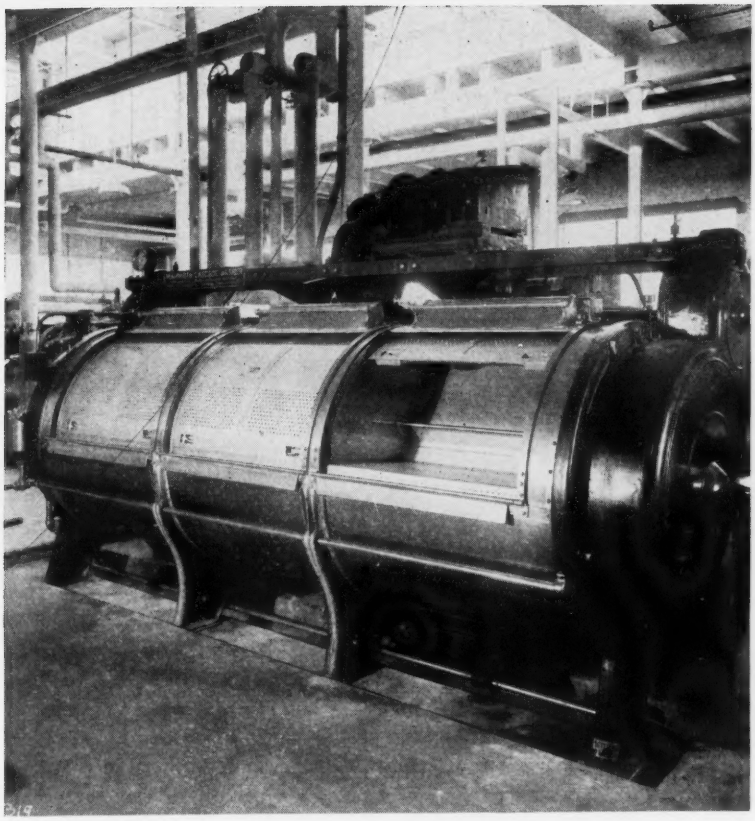
BARBERTON, OHIO

431 - 451 ST. CLAIR ST.
CHICAGO

CAREW TOWER
CINCINNATI

SANTA FÉ TERMINAL BLDG.
DALLAS

Plant at BARBERTON, OHIO



Modern laundry washing equipment requires modernized detergents and chemical control if maximum efficiency is to be secured.

DETERGENTS in Modern Laundry Practice

Part II

By C. A. TYLER, Ph.D.

THE subject of soap builders is a broad one. The efficiency of builders, also known as alkalies, has been demonstrated in practice over a long period of time. They are not merely soap savers. Soap alone is actually incapable of accomplishing results obtained with soap plus builder. This holds particularly for badly soiled work. Soil, as such, varies greatly, and is composed of many factors. A part of it is water-soluble, such as sugar and organic acids from fruit stains. A part is solid inert dirt such as soot or road dirt. Part of it is protein, and other organic matter from perspiration. The main reason for its being there at all, is the greasy matter which adheres both to the dirt and the fabric, coating the former and sticking to the latter. This greasy matter consists of saponifiable and unsaponifiable material, and free fatty acids in varying proportions.

Soap in solution acts first as a wetting agent. It wets the soil or causes the solution to spread evenly over it. Next it emulsifies or disperses the soil so that it is removed from the fabric and suspended throughout the solution. Removal of the solution causes the soil to be carried away with it. A good soap builder will increase the wetting and emulsifying power of soap solution by intensifying the properties which give it this power. The latter is attributed to the colloidal nature of soap solution, that is, the state of aggregation of its molecules and ions.

Soap, chemically, is the salt of a strong base and a weak acid. In solution it therefore hydrolyzes to give a certain amount of free alkali or hydroxyl ion. When acid soil is encountered, which is what happens in practice, the alkali from soap reacts with the acid, so that a part of the soap is wasted in performing a task entirely unrelated to wetting and emulsification. Also, the other product of hydrolysis is free fatty acid which is insolu-

Methods for quick determination of alkalinity is essential. Note testing set on left, handy to the battery of wash wheels.

ble. This reaction decreases the colloidality of the solution, since it carries the equilibrium toward the ionic state. A soap builder is also a salt of a strong base and a weak acid. Similarly it hydrolyzes in solution to give free alkali. The reason for using builder alone in the break is to allow it to neutralize the acids of the soil so that the soap will not be decomposed by neutralization. When soap is also used in the break, the builder used with it should be a stronger alkali than the soap itself. Otherwise the soap would react with the acid in spite of the presence of builder. This point will be enlarged on later.

Assuming that the acid soil has been neutralized in the break, builder now acts to further the detergent effect of soap solution. It does this mainly by a common ion effect, the sodium and hydroxyl ions from the builder suppress the hydrolysis of the soap and drive the equilibrium toward the colloidal or detergent state. It has been proved that soap formed in intimate contact with the soil is more effective than the same amount of soap introduced as such. Siliceous builders themselves form colloidal solutions and have a detergent action. This effect is additive to that of soap solution. Silicates possess this special property as well as those described above, which may be attributed to builders as a class.

Alkalinity—the Meaning of pH

IT IS impossible to discuss soap builders without considering the question of alkalinity, and in considering alkalinity, it is customary to speak in terms of pH. The latter expression is bandied about so familiarly that we sometimes forget its real meaning, the fact that it is logarithmic. At pH 7, the amount of alkali present in solution exactly balances the amount of acid, so that we say the result is neutrality. Below pH 7, that is 6, 5, 4, etc., the solution is acid, and above it, 8, 9, 10 etc. it is alkaline. The degree of alkalinity or concentration of hydroxyl ion, increases as the numbers become larger, but what we sometimes overlook is the nature of this increase. For the sake of simplicity, let us call a change from pH 7 to pH 8 one unit of alkalinity. Ten of these units will change the alkali concentration from pH 8 to pH 9. One hundred units will change it from pH 9 to pH 10. One thousand units will change it from pH 10 to pH 11, and ten thousand are needed to change from pH 11 to pH 12. That is why the pH scale may lead to confusion, because people forget that it takes ten thousand times as much alkali to go from pH 11 to 12, as it does from 7 to 8, although the arithmetical difference is only 1 in each case.

Soap concentrations, as ordinarily used in the power laundry, vary between 0.1 and 0.15 per cent. The amount of builder used in relation to the soap generally varies according to the strength of the builder. A strong builder, one giving an alkalinity buffered at a high level, may be used in the proportion of 1:1 with soap, a moderately strong one in the proportion of 2 parts of soap and 1 of builder and a weak one, 3 parts of soap and 1 of builder. In other words, less soap is necessary with a strong builder than with a weak builder. A 0.1 per cent soap solution hydrolyzes to give an alkalinity of pH 10.2. One-third that concentration, or a 0.033 per cent solution of caustic soda gives a pH of 11.85. As seen from the above, the actual difference in concentration of alkali is very large. As far as the laundry is concerned, this concentration of caustic soda is dangerously high and may attack fabric. Although caustic soda may still be used in a few cases, its use cannot be recommended because of its high unbuffered alkalinity. The upper limit of safety can be set at about pH 11.5. On the other hand, a builder is the more efficient, the greater its alkalinity, within the limits of safety.

Guaranteed Washability

A RATHER new idea in the laundry field is the cooperation of the manufacturers of washable garments with the laundry-owner. Many times the latter's troubles arise from shoddy garments being sent to him. Such materials cannot be expected to wash without shrinking and fading. However, the customer blames the laundry. The L.N.A. now protects the laundry-

owner in a measure by providing a testing service. Garments tested bear the seal of approval of the American Institute of Laundering. They are approved for workmanship, correct lasting fit, superior fabric, fast colors, and complete shrinkage. Some laundries have their drivers distribute folders of explanation to housewives. One particular New York laundry cooperates with the manufacturers to the extent of selling laundry-proof garments through their delivery service. The driver gets a small commission, the customer is pleased with the laundry service, and the laundryowner anticipates fewer damage claims and increased good-will.

Washable merchandise purchased for one of the large New York stores must meet the requirements set by them for washing, by one of three methods. The method to be used is stated on each order placed and the vendor's invoice must guarantee the merchandise as washable by the method agreed upon. Even if the clothes sent to the laundry are of good quality, the laundryowner must see that all possible precautions are taken in the washroom to obtain good results.

Survey of Laundry Supplies

A SURVEY of laundry supplies was made some five years ago by sending out questionnaries to laundryowners. Over 200 replies were obtained from all parts of the country, on which the following data are based: The average consumption of soap per laundry was 26,400 pounds per year. Of this 90 per cent was plain soap and 10 per cent built soap. Five per cent of the laundries used no free builder, but most of these were using a built soap. Among the others, the average consumption was 17,000 pounds of builder per year. This makes the average ratio 0.61 pound of builder per pound of soap. Thirty per cent were using modified soda as a builder, 19 per cent soda ash, and 23 per cent of proprietary product containing a mixture of metasilicate and soda ash. Three per cent were using caustic potash and 1.5 per cent caustic soda. Five per cent were using a proprietary borate-phosphate builder, and the rest 1 or 2 per cent of each of a number of other products. It would make an interesting comparison, if similar statistics were available at the present time. One would anticipate that they might be quite different due to the wide adoption of metasilicate and to a lesser extent of orthosilicate.

It is obvious that detergent ability cannot be expressed in terms of any simple factor. General lines of division are indicated, which point to the supremacy of the high alkali silicates over non-colloidal builders. The nearest one can come to a practical evaluation is by controlled washing tests made under standard conditions, using a standard soil. Certain builders have been compared by such a procedure, using 0.1 per cent soap solution plus 0.1 per cent builder. Their decreasing order of efficiency was found to be sodium orthosilicate, sodium metasilicate, a proprietary soda ash and metasilicate blend, caustic soda, soda ash, and modified soda.

Quick Washing Important

THE virtue of a soap builder is that it enables soap to remove soil quickly. In the following table this effect is shown in terms of the number of units of brightness regained after one wash, and after 4 washes, using 0.1 per cent soap and 0.1 per cent builder against a standard soil.

	Units of Brightness Regained	
Builder	*1st Wash*	*Next 3 Washes*
Sodium orthosilicate	12.12	None
Sodium metasilicate	11.25	1.00
Proprietary metasilicate + soda ash	10.63	0.75
Caustic soda	9.75	2.13
Soda ash	7.56	1.44
Modified soda	7.50	2.38

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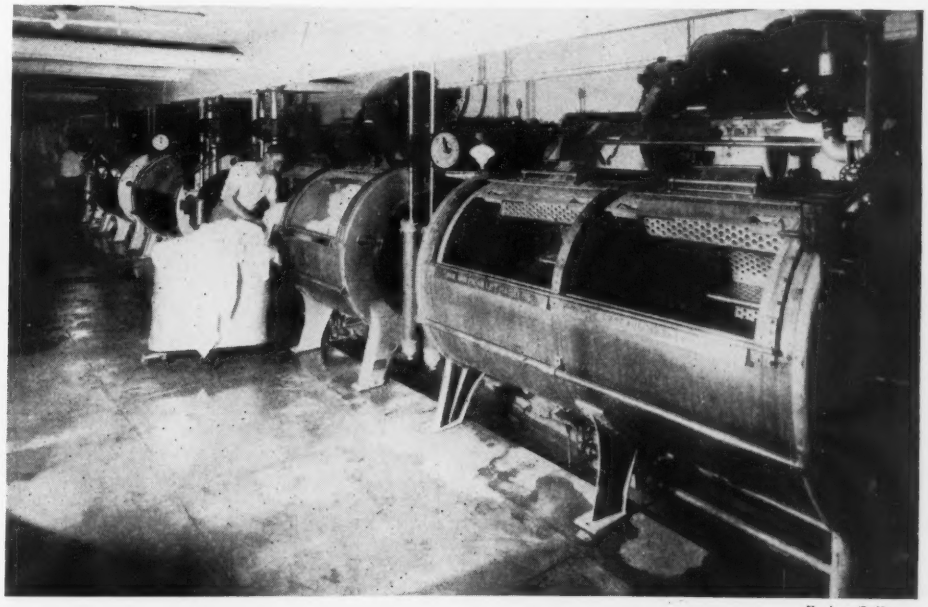


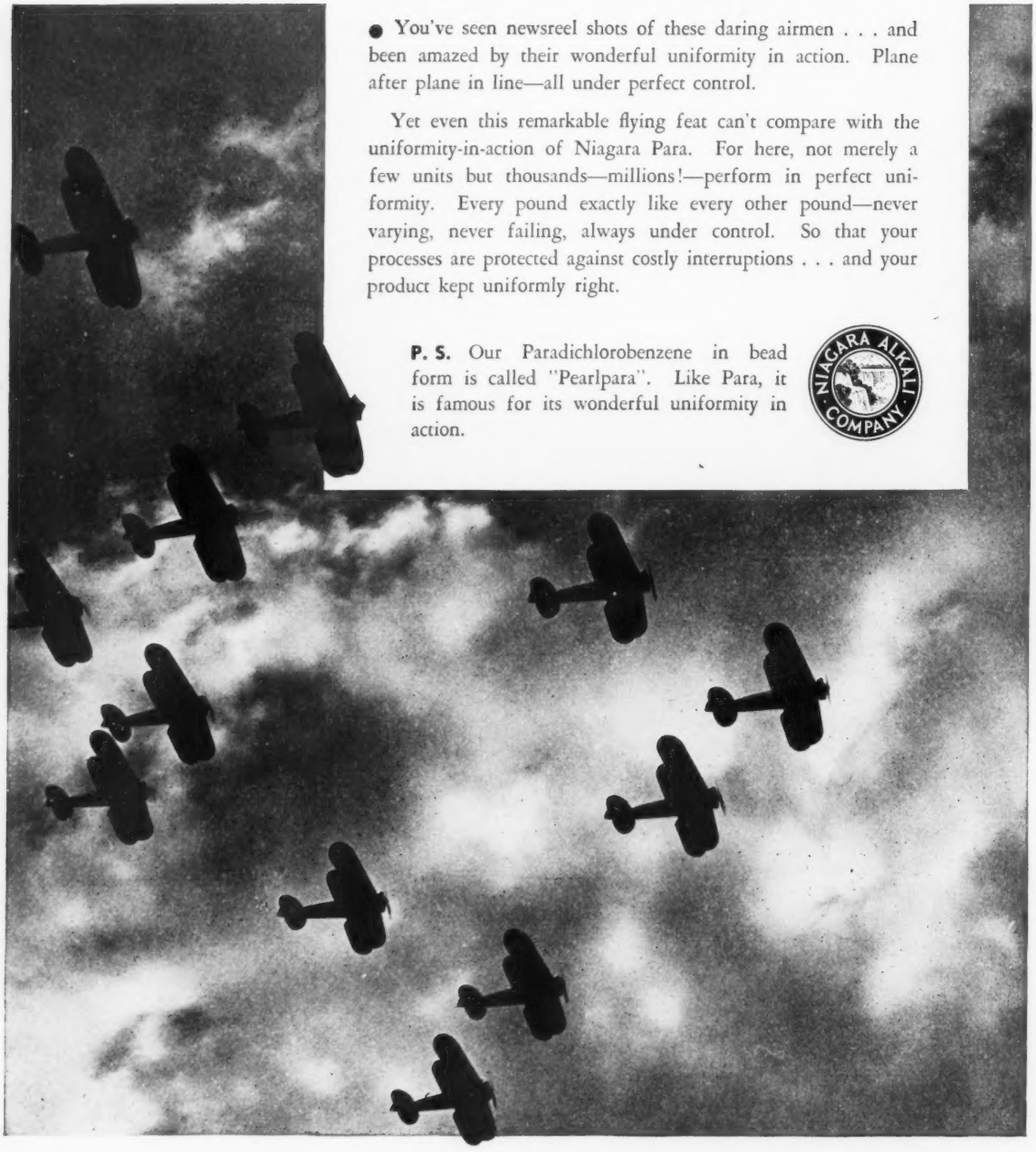
Ewing Galloway

The average laundry uses 26,400 pounds of soap and 17,000 pounds of soap builders or laundry alkalies per year. Ninety-five per cent of all laundries use soap builders.

Niagara PARA

(unadulterated paradichlorobenzene)

—more uniform in action than a squadron of bombers!



● You've seen newsreel shots of these daring airmen . . . and been amazed by their wonderful uniformity in action. Plane after plane in line—all under perfect control.

Yet even this remarkable flying feat can't compare with the uniformity-in-action of Niagara Para. For here, not merely a few units but thousands—millions!—perform in perfect uniformity. Every pound exactly like every other pound—never varying, never failing, always under control. So that your processes are protected against costly interruptions . . . and your product kept uniformly right.

P. S. Our Paradichlorobenzene in bead form is called "Pearlpara". Like Para, it is famous for its wonderful uniformity in action.

NIAGARA ALKALI COMPANY

NIAGARA ALKALI COMPANY

NINE EAST FORTY-FIRST STREET, NEW YORK, N. Y.

Associated with Electro Bleaching Gas Company
Pioneer Manufacturer of Liquid Chlorine

The Oil Soap Industry

Part IV (Conclusion)

By S. J. MILLER, Ch.E.

ALTHOUGH the most important products of the oil soap industry have been considered in the three preceding articles of this series, there are still a few items, not of such great moment individually, but which collectively account for enough of the business of the average oil soap maker to justify their inclusion here.

Foremost of these, probably, though of comparatively recent development, are the various aqueous wax emulsions which have risen to an enormous and deserved popularity in a very short time. They are used on floors of almost every kind, and have found favor with users because they are in liquid form and therefore are easy to apply, and because they dry to a lustrous finish without mechanical buffing.

Their base is a suitable wax,—mostly carnauba,—and the secret of their manufacture lies in getting a uniform and permanent dispersion of the wax in exceedingly minute particles. Most specifications, in the case of large buyers, call for a volatile content of about 85%. The solids are mostly wax, with just enough soap to form and maintain the desired emulsion. Since free glycerine is not desired in the finished product, these soaps are almost invariably formed from oleic acid, saponified with any alkali. The best alkali to use is a debatable matter, and one on which there is no general agreement. In some cases, potash is used; in others, triethanolamine; in others, mixtures of ammonia and potash. The use of too much ammonia is deprecated, because it is said to bring about a slight but progressive darkening of the product on long storage, as well as to cause a noticeable deepening of shade of light colored floor surfaces on which the product is used.

There is, of course, an optimum amount of soap for any given percentage of wax. This varies with the type of soap used, and with the nature and the amount of the gums, salts and other emulsifying and buffing aids that may be incorporated in the formula. Too small an amount of soap makes for unstable emulsions; too much destroys the self-buffing character of the product and reduces its resistance to later wet moppings or accidental contact with water. The actual technique of preparing these emulsions has been very well presented in a number of trade pamphlets during the past few years. The vital point, as in most such cases, is the exact control of temperature to avoid formation of wax grains too large, on the one hand, or a complete separation to the surface, on the other.

These products are applied simply by mopping them onto the floor in straight strokes, as thinly as possible, but with complete coverage. Their performance fully justifies the fairly high prices which they command, because the liquid form in which they are sold makes it possible to wax a very large area with a single gallon of the material, and in the same way avoids the likelihood of formation of a too thick and easily marred wax film.

Some of the other soaps and cleansers commonly prepared and marketed by the oil soap industry include dishwashing compounds, pine oil disinfectants, soluble oils and bases, as well as numerous specialties of individual companies. As examples of these might be mentioned tar removers, window cleaners and similar cleansers, some of which are not in the least saponaceous.

Dishwashing compounds were the subject of an article in the June, 1934, issue of SOAP. Pine oil disinfectants offer few manufacturing difficulties, except possibly in close control of the phenol coefficient, and it is unquestionably true that many smaller manufacturers pay no attention at all to this factor, or depend upon an out of date specimen analysis for their data. Because of the amount of soap used in emulsifying the pine oil, these disinfectants generally possess a material cleaning power. The pine oil increases this detergent effect through its solvent power, and it creates very strongly the impression of cleanliness because it is able to destroy or to mask the malodorous conditions in washrooms, corridors and similar much used but little respected places. At the same time, the odor which it leaves, although often quite noticeable, is not at all unpleasant.

Pine oil disinfectants should not be sold in conscious violation of the regulations governing pine oil coefficiency, naturally, or should mere speculative and unfounded claims be made for these products. In this writer's opinion, however, the specific matter of toxicity against B. Typhosus is more often than not quite secondary, to the ability of the product to remove dirt and discoloration, and to banish noxious odors. The solvent power of pine oil, and of the various cresylic acids as well, is also being made use of in products designed expressly for cleaning. These materials are being used in admixture with liquid soaps, as well as in dry preparations, for severe cleaning jobs, such as the washing of greasy concrete surfaces, for cleaning machinery, and for washing metal parts prior to lacquering and other finishing operations.

This mention of heavy industrial cleaning brings to mind a very curious use of oil soaps in the building industry. In some cases, these soaps are used in a fairly

viscous aqueous solution for painting the insides of concrete frames or forms, before pouring. It is claimed that this greatly lessens the labor of removing the forms, and imparts an attractively smooth and burnished appearance to the hardened concrete. Obviously, the excess moisture must be allowed to evaporate from the soap film before the concrete is poured, in order to avoid mixing into the mass, with consequent loss of the desired effect and production of quite opposite results.

Cutting compounds, soluble oils, and their bases are manufactured and marketed to a considerable extent by oil soap makers. Essentially, of course, they are nothing more than emulsions of oils in soap solutions. Their uses are not of a detergent nature, however, and their manufacture deviates widely from ordinary oil soap operations, so they should not properly be included here.

Somewhat the same situation obtains with respect to dry cleaning soaps. It is true, of course, that their use is largely detergent. And it is also true that these soaps are in many cases made and sold by oil soap companies, but they form such a well defined sub-class, both in manufacture and in use, that it seems illogical to include them in this series. They offer ample material for a separate discussion, ranging as they do all the way through superfatted potash, ammonia and lime soaps, the newer sulphonated alcohol products, and the various specialties designed for use in carbon tetrachloride systems.

FROM the commercial point of view, the oil soap field presents a picture which is somewhat confusing in its diversity, but which is probably no more varied than any other sizeable industry.

Some manufacturers sell direct to the trade; some sell through distributing organizations; most of them combine the two methods. Some advertise freely in the appropriate trade journals; others depend entirely upon the word of mouth promotion supplied by the members of their sales force. Obviously, advertising in general publications is of little or no use to the oil soap maker, because he sells to a bulk user, who consumes the soap in his process, so to speak, and the general public hardly knows that such soaps exist. One very large outlet for oil soaps is the automobile washrack, yet the average car owner never thinks of demanding that a certain soap be used on his car, and it is exceedingly doubtful whether the advertising expense required to develop such a demand among car owners would ever be justified in increased sales.

To continue the same example, it seems reasonable that advertising in automotive trade journals which actually reach the man in charge of the washing should produce good results in aiding the personal efforts of the salesman. A drum of this soap, however, represents a sale of from fifteen to seventy dollars, depending upon size, so the most that should be expected of the best advertising is that it will gain a favorable reception for the salesman and that it will remove some of the instinctive disinclination to change from a known satisfactory product to an untried one.

The same thing is true in the case of the various oil soaps which are sold for janitorial cleaning operations. A salesman can undoubtedly show a high ratio of sales to calls if the prospect's mind in each case has been prepared by means of convincing printed copy. As mentioned, the ratio will be higher. Whether or not it will be enough higher to justify the expense is a question to be decided by each company, and the answer will be determined largely by such factors as present distributions, both as to type and extent, competitive prices, the degree of the advertiser's present acceptance by the trade, and the known buying tendencies of certain types of consumers.

As a matter of fact, this advertising question has been variously answered. One company uses magazine advertising copiously; another makes great use of direct mail; another concentrates its efforts on the conventions held annually by the different trade groups; still another depends entirely upon its salesmen. The only method which has proved almost entirely unsuccessful is the attempt to induce a demand on the part of the general public such that the soap user will be compelled to buy the soap in question. It appears that most people are very little interested in the means used in producing a given result, so long as that result is satisfactory to them. This, after all, is what one should expect.

The most convincing argument that can be presented to large users is definite evidence that the product is being used by other buyers whose requirements and business standing are fairly comparable. The familiar testimonial, therefore, is one of the most potent weapons in the arsenal of the oil soap advertiser, as indeed is the case with almost every other product, from cigarettes to locomotives. Obviously, it is equally adapted to presentation by direct mail, by the salesmen, or by means of printed advertisements. In all forms, it is effective.

LACK of price uniformity is as prevalent in the oil soap industry as in many others, but no more so. It is not the handicap that one might imagine, because variations in concentration and quality of product fully justify the wide range of prices, and because a slight difference in initial price per pound or gallon becomes negligible when figured on the bases of cost per unit of area washed. The widest discrepancies appear in the case of very small local manufacturers, or more often jobbers, who rely heavily upon the local patronage idea to hold their business. These cases, while annoying and undesirable, are nevertheless too small to be considered a major merchandising obstacle, especially since most of these very small sellers are not manufacturers, and hence cannot provide the technical service, the assured uniformity of product, or the price

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Soap Production Down 6.3%

Soap Value Cut 22.7%—Laundry Bar Greatest Loser—Toilet Soap, Cleanser, Flake Tonnages Up in 1933

COMPARED with 1931, the production of soaps in the United States was 6.3 per cent less in tonnage in 1933, according to preliminary figures of the Bureau of the Census. The dollar value of the production in 1933 was 22.7 per cent less than in 1931. The greatest loss in production was in bar laundry soap which dropped almost two-hundred million pounds in 1933. An increase in tonnage in 1933 was noted in toilet soaps, chips and flakes, and cleansers and scouring powders. In spite of this increase in tonnage, all showed sharp declines in dollar value. A rough estimate places the general level of prices which soap manufacturers received for their goods in 1933 at about 20 per cent below the levels of 1931.

The value of soap and other products made in the United States in 1933 by establishments engaged primarily in the manufacture of soap and related products amounted to $199,329,784, a decrease of 22.7 per cent as compared with $257,718,699 reported for 1931, the last preceding census year. Decreases appear also for the other items covered by the report, except number of wage earners, which shows a slight increase from 14,163 in 1931 to 14,185 in 1933.

Statistics for 1933 in comparison with 1931 are given in the tables below. All figures for 1933 are preliminary and subject to revision.

	1933	1931
Number of establishments	218	248
Wage earners (average for the year)[1]	14,185	14,163
Wages[2]	$14,310,048	$17,739,732
Cost of materials, containers, fuel, and purchased electric energy[2]	$93,063,168	$121,829,338
Products, total value[2]	$199,329,784	$257,718,699
Soap and related products[3]	$164,675,863	$228,330,828
Other products (not normally belonging to the industry)[3]	$22,707,683	$29,387,871
Soap and related products and products not normally belonging to the industry, not reported separately[4]	$11,946,238	.....
Value added by manufacture[5]	$106,266,616	$135,889,361

[1] Not including salaried officers and employees. The data for such officers and employees will be included in a later report. The item for wage earners is an average of the numbers reported for the several months of the year. In calculating it, equal weight must be given to full-time and part-time wage earners (not reported separately by the manufacturers), and therefore it exceeds the number that would have been required to perform the work done in the industry if all wage earners had been continuously employed throughout the year. The quotient obtained by dividing the amount of wages by the average number of wage earners can not, therefore, be accepted as representing the average wage received by full-time wage earners. In making comparisons between the figures for 1933 and those for 1931, the possibility that the proportion of part-time employment was larger in one year than in the other should be taken into account.

[2] Manufacturers' profits or losses can not be calculated from the census figures because no data are collected for certain expense items, such as interest, rent, depreciation, taxes, insurance, and advertising.

[3] Not strictly comparable with the figure for 1931 because of the fact that a small but indeterminate amount is included in the item "Soap and related products and products not normally belonging to the industry, not reported separately." (See headnote to Table 2.)

[4] See headnote to Table 2.

[5] Value of products less cost of materials, containers, fuel, and purchased electric energy.

The principal items that entered into the total for 1933 are as follows: Toilet soap, 310,158,171 pounds, valued at $44,078,616; soap chips and flakes, 398,500,432 pounds, valued at $24,885,814; laundry soap (in bar form), white and yellow, 1,246,799,382 pounds, valued at $44,184,646; granulated and powdered soap, 368,072,178 pounds, valued at $31,348,311; cleansers and scouring powders containing soap, 165,627,469 pounds, valued at $5,870,912. (See headnote to Table 2.)

In addition, soap and related products are made to some extent as secondary products by establishments engaged primarily in other lines of manufacture. The production of these commodities outside the industry proper in 1931 was valued at $9,731,294, equivalent to 4.3 per cent of the value of the production within the industry. The corresponding figure for 1933 is not thus far available but will be given in the final report of the present census.

Table 2.—Products by Kind and Value:

	1933	1931
Soap and related products, total value	.....	$238,062,122
Made in the soap industry:		
Soap and related products	$164,675,863	$228,330,828
Reported by kind	$156,373,966	$228,330,828
Not reported by kind	$8,301,897	.....
Soap and related products and products not normally belonging to the industry, not reported separately[1]	$11,946,238	.....
Made as secondary products in other industries	.....	$9,731,294
Toilet soap:		
Pounds	310,158,171	305,638,280
Value	$44,078,616	$53,064,155
Soap chips and flakes:		
Pounds	398,500,432	351,076,793
Value	$24,885,814	$30,353,303
Laundry soap (in bar form), white and yellow:		
Pounds	1,246,799,382	1,431,104,174
Value	$44,184,646	$68,385,117
Granulated and powdered soap:		
Pounds	368,072,178	421,803,780
Value	$31,348,311	$40,976,787
Cleansers and scouring powders containing soap:		
Pounds	165,627,469	164,067,301
Value	$5,870,912	$6,382,874
Shaving soap, cream, and powder:		
Weight reported—		
Pounds	10,201,811	10,452,597
Value	$5,334,209	$7,025,273
Weight not reported, value	(2)	$4,528,008
Soap stock or soap base, for sale:		
Pounds	24,040,954	8,977,784
Value	$671,458	$546,682
Soap and related products not reported by kind, value	(3)	$26,799,923

[1] See explanation below

[2] Not yet available; will be given in final report.

[3] Data incomplete; included principally in items "Soap and related products and products not normally belonging to the industry, not reported separately" and "Made as secondary products in other industries." (See first section of table.)

(This table does not cover all the items for which detailed production data were reported by the more important manufacturers. This incompleteness is due to the use of an abbreviated schedule for canvassing the

(*Turn to Page* 47)

New Products

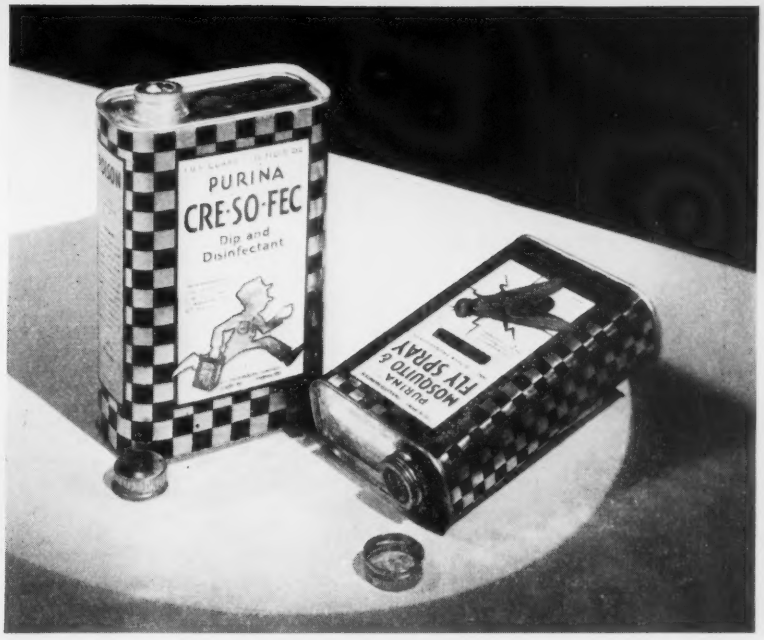
Four new products and handsome packages from Canada—various forms of Wood's Lik-Wid Shampoos, — Castile, Lemon, Tar, and Soapless Shampoos. Bottles capped with plastic closures and wrapped in cellophane. Products manufactured and marketed by G. H. Wood & Company of Toronto.

Something brand new in a liquid soap which gets away from the ordinary coconut oil product. Orange in color and sold in thirty per cent concentration. Sil'kis Liquid Soap is manufactured by Fuld Brothers of Baltimore. This is merely a dealer sample bottle.

Stock moulded packages with hinged covers now make their appearance suggested for fancy and gift toilet soaps, one, two or three bars to the box. Made of moulded Durez. A soap package with innumerable re-uses.

and Packages

Brite-ize Cleanser makes its appearance on the market in a striking nile green, black and white fibre container with sprinkler top. Manufactured by the Barnes-Noble Co. of Minneapolis.



Two well-known Ralston Purina products adopt an air-tight, transparent seal in addition to the regular screw cap,—Filma-seal by Ferdinand Gutmann & Company of Brooklyn. Cre-so-fec and fly spray by Ralston Purina Company of St. Louis.

All the way from Texas comes "Spotz," a new cleaning and spotting fluid in a smart modern bottle with moulded closure and metallic label. Product made by Globe Laboratories of Fort Worth, Texas. Bottle is a stock item from Owens-Illinois.

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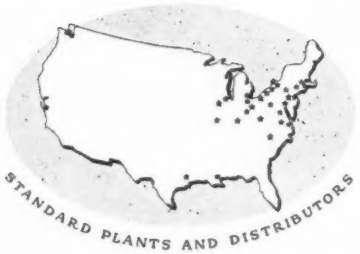

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Soap Code Interpretations

Issued by Soap and Glycerine Code Authority and Approved by National Recovery Administration

THE following additional interpretations of the Soap and Glycerine Manufacturing Code have just been approved by the NRA and issued by the Code Authority of the industry. These interpretations have been made by the Code Authority in response to questions submitted by firms in the industry. Any question regarding the soap and glycerine code should be submitted direct by any manufacturer to the Code Authority of the Soap and Glycerine Manufacturing Industry, 386 Fourth Avenue, New York. Under the NRA, these interpretations when approved by the Administration, have the force of law. Questions on the soap code should not be submitted by manufacturers to local representatives of the NRA—all should be directed to the main office of the soap code authority in New York.

QUESTION: Does a manufacturer of shaving soap, creams or powder come under the Soap and Glycerine Code or under the Perfume, Cosmetic and other Toilet Preparations Code?

ANSWER: A manufacturer in Continental United States of shaving soap or shaving cream or powder containing soap, is subject only to the Code of Fair Competition for the Soap and Glycerine Manufacturing Industry insofar as he produces and sells these products. Any individual or firm which buys soap base and converts it into shaving soap, cream or powder is a manufacturer within the meaning of the Soap and Glycerine Code.

FACTS: I represent two concerns who have engaged in manufacturing soap, but whose factories are now closed and who now employ no labor. They have some goods on hand that they are trying to dispose of, but will make no more soap for a long time.

QUESTION: Are these soap companies subject to the provisions of the Soap and Glycerine Code, and must they make reports to the Code Authority the same as if they were actually manufacturing soap?

ANSWER: The companies you represent are really soap manufacturers, and although they do not produce soap at the present time, they are subject to all provisions of the Soap and Glycerine Code insofar as they engage in any phase of soap manufacturing, which includes the sale of the product to the first purchaser.

As soap manufacturers, the companies must supply any statistical or other information required under the Code.

QUESTION: Must a worker paid by the day be considered as being on an hourly rate in applying the overtime provisions of Article III, Paragraph B, of the Code of Fair Competition for the Soap and Glycerine Manufacturing Industry?

ANSWER: A worker paid by the day must be considered as being paid by the hour if he works overtime. He would be entitled to one and one-third the hourly rate if he should work more than eight hours in any 24 hour period, or more than 40 hours in any calendar week.

FACTS: In checking over our employment records, we find a few instances where we have not paid our employees the full wages required under the Soap and Glycerine Code. Some of the under-payments occurred months ago, and in one instance the worker is no longer in our employ. The under-payments occurred either because we misunderstood Code provisions or because we did not know under what section of the Code the particular employees belonged.

QUESTION: Does the Code require that whenever we find an employee has been underpaid, we pay him the difference between what he did receive and what he should have received, or is it sufficient that we do whatever may be necessary to prevent such under-payments in the future?

ANSWER: Every employer who has underpaid an employee must, upon discovery of the under-payment, promptly pay the employee the difference between what he did receive and what he should have received under the Code.

QUESTION: Is a manufacturer of shampoo subject to the Soap and Glycerine Code, or the Perfume, Cosmetic and Toilet Preparations Code, or both?

ANSWER: A manufacturer of soap shampoo in Continental United States is subject only to the Code of Fair Competition for the Soap and Glycerine Manufacturing Industry insofar as he produces and sells soap shampoo. Soap shampoo means a shampoo made principally by adding water or any other diluent to soap or soap base, or a shampoo made wholly or partially by saponifying fat or oil.

Any individual or firm which buys soap base and converts it into shampoo, is a manufacturer within the meaning of the Soap and Glycerine Code.

FACTS: In checking our employment records, we find some instances where employees worked more than the maximum number of hours permitted by the Code of Fair Competition for the Soap and Glycerine Manufacturing Industry. All of them were paid Code wages, including overtime.

QUESTION: If an employee has worked more than the maximum hours permitted by the Code, are we obliged to lay him off at a later date so as to adjust the hours down to the Code maximum?

ANSWER: Yes.

FACTS: We make some soap, but all of it is used exclusively by us in the compounding of insecticides and disinfectants.

QUESTION: Do we come under the Code of Fair Competition for the Soap and Glycerine Manufacturing Industry?

ANSWER: A manufacturer who uses all the soap he produces in compounding insecticides and disinfectants is not subject to the Code of Fair Competition for the Soap and Glycerine Manufacturing Industry.

If such a manufacturer should market any of the soap he makes as soap or as a soap product he would, of course, come under the Soap and Glycerine Code.

FACTS: We have in our employ a number of persons who come within the classifications set forth in Subsections 1 and 2, Paragraph A of Article III of the Code, who receive weekly salaries of loss than $35. per week.

Some of these employees work as much as 48 hours per week.

QUESTION: Must employees engaged in occupations coming under the classifications set forth in Section 1 and 2, Paragraph A, Article III of the Code, who works more than 40 hours per week but who are paid a weekly salary, be paid time and one-third for every hour over 40 worked per week?

ANSWER: No, the overtime provision applies only to employees who are paid by the hour. An employee paid a weekly salary may be worked up to the maximum permitted by the Code without having to be paid overtime.

FACTS: We have our soap manufactured for us by several private brand manufacturers, we acting only in the capacity of a selling organization. We have in the past wrapped some of the institutional sizes here, but have never manufactured any soap.

QUESTION: Do we come under the Soap and Glycerine Code?

ANSWER: If you wrap soap, you are engaged in a manufacturing operation which would make all your soap business subject to the provisions of the Code of Fair Competition for the Soap and Glycerine Manufacturing Industry. On the other hand, if you have your soap made for you by another soap manufacturer, and do not wrap it or engage in any other manufacturing operation on it, you are not subject to this Code.

FACTS: We posted notices on the bulletin board to the effect that no employee may work for another employer without permission from us and that to do so would be cause for discharge. A few came to us, and we cautioned them that they must not work a total of more than 40 hours in any week.

QUESTION: Must we do anything more than caution our employees known to be working for another employer not to work more than 40 hours in any week, in order to comply with the requirement of the Code that employers "exercise due diligence" in knowingly not permitting their employees to work for anyone a total number of hours in excess of the Code maximum?

ANSWER: An employer who knows that an employee is working for another employer is not exercising "due diligence" unless he periodically obtains from the employee the additional hours worked for the other employer and assures himself that his employee is not working more than the maximum hours permitted under the Soap and Glycerine Code.

FACTS: A member of the Soap and Glycerine Industry having an established work shift of 8 hours, with a brief paid lunch period, requires a worker or the workers of one department to remain on the premises 8 hours, but pays such worker or workers for only 7 hours and calls the extra or lost hour a lunch period. The rest of the plant is on an 8 hour shift, with a brief paid lunch period.

QUESTION: Is this to be considered as a violation of the Code of Fair Competition for the Soap and Glycerine Manufacturing Industry?

ANSWER: If an employee is required to be on the premises 8 hours, it would be a violation of the Code to pay him less than eight times the regular hourly rate of pay. However, if he worked only 7 hours and was free to come and go during the one hour lunch period, the employee would be paid for only the 7 hours actually worked.

QUESTION: May men of 21 years and over engage in the light tasks of wrapping, packaging and filling?

ANSWER: The Code does not provide any limitation on the age of employees engaged in the light tasks of wrapping, packaging and filling, except that it does prohibit the employment of anyone under 16 years of age.

FACTS: Three of the soaps we manufacture are marketed through cosmetic channels.

QUESTION: Is it permissible to have these soaps manfactured under the hour and wage provisions of the Soap and Glycerine Code, and sold under the Trade Practises of the Cosmetic Code?

ANSWER: The manufacture and the sale by the manufacturer of soap made in Continental United States is covered solely by the Code of Fair Competition for the Soap and Glycerine Manufacturing Industry.

QUESTION: Is there any provision in the Code of Fair Competition for the Soap and Glycerine Manufacturing Industry under which an employer who finds it necessary to reduce his work day to 6 hours must pay his employees at the 8 hour rate?

ANSWER: There is no provision in the Soap and Glycerine Code which would make it compulsory for a manufacturer to pay employees, who are on an hourly rate of pay, for 8 hours work when they work only 6 hours.

Liquid soaps, imported from the United States and containing about 8 per cent alcohol are the subject of a reference from the Department of National Revenue, at Ottawa, to the Canadian Tariff Board, with a view to obtaining a ruling as to their admission under the regular tariff items from which they were excluded owing to their alcoholic content. The Department asks the Tariff Board to decide whether the tariff item concerned covers alcoholic as well as non-alcoholic materials.

The index of employment in the laundry industry stood at 84.0 in June, 1934, as compared with the 1929 average of 100. This represented an increase of 2.3 over the figure for the previous month and an increase of 6.1 above the reading for June, 1933.

Procter & Gamble Company has announced that the "Gibson Family" whose activities have been the subject of magazine advertising copy on "Ivory" soap will shortly go on the air over a national network as stars in an original musical comedy.

Stokes & Smith Co., Philadelphia, recently mailed a folder describing its "Universal Filling Machine." The folder illustrates the wide variety of products and packages handled by this flexible machine.

Stafford-Miller Company, Brooklyn, has appointed Husband & Thomas Company, New York agency, to handle the advertising of a new tooth powder. Newspapers and radio will be used in test campaigns.

Peebles Chemical Co., Rosslyn, Va., was low bidder on 20,000 lbs. caustic soda for the U. S. Bureau of Engraving and Printing, Washington, in a recent bidding, with a quotation of 3.45c per lb.

Great Lakes Chemical Utilities, Inc., Buffalo, announce the opening of an Eastern sales office at 130 West 42nd St., New York, in charge of Trinity Associates, Inc., sales agents.

CHICAGO TRADE NOTES

THE third golf tournament of the Golf Auxiliary of the Chicago Drug and Chemical Association and the Chicago Perfumery Soap and Extract Association drew a record crowd of 56 members and guests to the Bob-O-Link Country Club July 17th. The following were prize winners: Class A:—Al J. Dedrick, first with 87-15-72; John James, second with 87-13-74; Al Stepan, third with 92-14-78; Class B:—Paul Pettit, first with 99-21-78; Dudley Lum, second with 100-22-78; Phil Rising, third with 98-17-81; Class C:—T. F. Gilson, first with 94-23-71; C. P. Van Schaack, second with 108-33-75; H. Lancaster, third with 102-25-77. Guest prizes, Clyde Marshall with 94-23-71 and P. J. Aubineau with 85-12-73. The fourth tournament will be held August 14 at Olympia Fields Country Club.

—♦—

Triangle Package Machinery Co., Chicago, have recently put out an interesting folder illustrating and describing some new installations of Triangle packaging machines.

—♦—

Chicago Sanitary Products Co. are now marketing an oil soap known as Kleenwell XX Oil Soap, suitable for a wide range of uses. The soap is packed in a self-mixing drum.

—♦—

Hanser Soap Company, Milwaukee, is building an addition to its factory which will about double production facilities. This step has been under consideration for some time and has been made necessary because of a greatly increased volume of business.

—♦—

Barnes-Noble Company, Minneapolis, is introducing their Brite-ize cleanser to the Chicago market through the various Marshall Field stores. This product has for some time been a good seller in the northwestern part of the country. An extensive sampling campaign is planned to bring the cleanser to the attention of housewives.

—♦—

The annual convention of the American Cosmeticians Associations is scheduled for the Hotel Sherman, Chicago, August 20 to 22. The National Hairdressers & Cosmetologists Association will meet at the Edgewater Beach Hotel, Chicago, September 9 to 13.

—♦—

Frank R. Deutman, vice-president of Provident Chemical Works, St. Louis, died July 24 of heart disease. He was 50 years old and had been with the company for thirty-five years.

—♦—

A super-chain grocery buying organization is understood to be in process of formation by the merger of five big corporate chains and three subsidiaries. The chain would control a total of 14,640 units. The stores involved are reported to be the Kroger Grocery and Baking Co., Cincinnati, Safeway Stores, Inc., First National Stores, Inc., Somerville, Mass., American Stores Co., Philadelphia, and National Tea Co. The name of the buying organization is to be the Food Distribution Association, with offices at 220 East 42nd St., New York.

—♦—

A six million dollar fund to provide loans to producers of gum rosin and turpentine who are signers of the marketing agreement for the industry has been set up by the Reconstruction Finance Corp. Loans will be made on warehouse receipts for 1934 production within the producer's allotments provided for in the marketing agreement. Loans from $4.00 to $4.50 per barrel can be made on the various grades of rosin.

—♦—

Exports of gum rosin from United States during June, 1934, totaled 77,767 barrels, worth $669,896. Exports of wood rosin aggregated 18,304 barrels, valued at $149,518.

—♦—

Bristol-Myers Company announces the purchase of the entire outstanding capital stock of Rubber and Celluloid Products Company. This company together with its subsidiaries, Rubberset Company of New York and Rubberset Company, Ltd., of Canada, is one of the oldest and largest manufacturers of shaving, toilet and other brushes.

—♦—

OIL-FAT PRICES UP IN JULY

A slight increase occurred in the July oils and fats price index as compiled by the Bureau of Raw Materials for American Vegetable Oils and Fats Industries. The average price index number of the 23 oils and fats was 73.7 for the month of July, as compared to 72.8 in June. The index numbers of the various oils and fats for the months of June and July, 1934, are as follows:

	July 1934	*June*, 1934
Castor oil	97.3	97.3
Corn oil	102.1	93.5
Cottonseed oil	89.1	77.4
Lard	44.2	40.6
Oleo oil	62.7	57.9
Peanut oil	75.5	70.3
Soybean oil	109.3	109.3
Chinawood oil	109.3	107.7
Coconut oil	37.0	40.2
Cod oil	94.7	103.2
Grease	59.5	55.6
Herring oil	46.8	46.8
Linseed oil	108.6	110.7
Menhaden oil	61.4	72.5
Olive oil	101.0	104.0
Olive oil foots	99.5	99.5
Palm oil	32.8	31.7
Palm kernel oil	36.2	38.4
Rapeseed oil	57.0	58.7
Sesame oil	80.6	83.7
Stearin, oleo	57.6	48.4
Tallow	54.4	49.5
Whale oil	103.4	103.4

The price index number of K grade rosin decreased from 77.4 in June to 72.0 in July.

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TECHNICAL BOOKS

Perfumes, Cosmetics and Soaps, by Poucher. New and revised edition of this standard reference. Volume I, a dictionary of materials, 394 pages, $6.50. Volume II, dealing with the manufacture of soaps, perfumes and toilet preparations, 406 pages, $9.00.

Modern Cosmetics, by Chilson. 400 pages of practical, usable information for the manufacturer of cosmetics. Formulas and manufacturing instructions for everything in the cosmetic line, $6.00.

The American Soap Maker's Guide, by Meerbott and Stanislaus. The most recent American publication on soap manufacturing. 750 pages. $7.50.

Textile Soaps and Oils, by Hurst & Simmons. A handbook on the preparation and properties of soaps and oils used in textile manufacturing, 212 pages. $4.00.

Henley's Twentieth Century Book of Recipes, Formulas and Processes. A handy reference book listing 10,000 miscellaneous formulas, including special sections for soaps, polishes, insecticides, etc. 800 pages. $4.00.

The Industrial Chemistry of Fats and Waxes, by Hilditch. A study of the fats and waxes in relation to their use in industry. 450 pages. $6.00.

Manual of Toilet Soap, Making, by Deite. Translation from a standard German text on manufacture of toilet and medicated soaps. 360 pages. $8.00.

Art of Soapmaking, by Watt. Practical handbook on the manufacture of hard and soft soaps. 323 pages. $4.00.

Hydrogenation of Organic Substances, by Ellis. Latest revised edition of this well-known book, pre-eminent in the field of hydrogenation. 990 pages. $15.00.

Modern Soap and Detergent Industry, by Martin. Second Edition. An outstanding contribution to the literature on soap manufacture. Thoroughly up to date work covering processes, apparatus and formulas. In two volumes—cloth binding, 6½ x 10½. Price $12.00 for each volume.

Modern Soap Perfumes, by Sedgwick. A practical handbook on the science of soap perfumery. $1.00.

Pyrethrum Flowers, by Gnadinger. A complete compilation of all known facts on pyrethrum; its history, sources, evaluation, chemistry and uses. The problems involved in the manufacture of pyrethrum products are given thorough and lucid exposition. 270 pages. 3.50.

Soaps and Proteins, Their Colloid Chemistry in Theory and Practice, by Fischer. 272 pages. $4.00.

Soaps, by Hurst. A practical manual of soap manufacture. 440 pages. $8.50.

A Handbook of Soap Manufacture, by Simmons and Appleton. 167 pages. $4.00.

Soap Blue Book, A Buyer's Guide. 195 pages. $1.50.

Vegetable Fats and Oils, by George S. Jamieson. 444 pages. An American Chemical Society Monograph. Covering classification, occurrence, properties, analytical methods, etc., of vegetable oils, fatty acid and other derivatives; also production and refining methods. $6.50.

Chemistry of Laundry Materials, by D. N. Jackman. A new book for the laundry operator, containing valuable information on the chemistry of laundry materials. Discusses alkalies, soaps, bleaches, starches, also the newer detergents, synthetic soaps, etc. 230 pages. $2.50.

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STRIKE AT LEVER HAMMOND PLANT

A strike at the Hammond, Ind., plant of Lever Brothers Co. on August 6, has curtailed operations there according to news reports from Chicago. The strike was called by the Glycerine and Soap Workers International Union which claimed that all of the 400 employes at the plant had walked out. Bruce Vernon, manager of the Hammond plant, stated that only 25 per cent of the employes had gone on strike. The union is demanding a five per cent wage increase for employes earning more than 80 cents per hour and a ten per cent advance for all employes earning less than this figure. Pickets were reported patrolling near the plant but no violence occurred.

TOILET SOAPS MUST PAY DOUBLE TAX

Features of the Revenue Act of 1934 which toilet soap manufacturers protest have the effect of imposing double taxation against them—both toilet goods tax and three-cent excise tax—will be applied exactly as written, the Bureau of Internal Revenue has ruled in rejecting the manufacturers' protest. Under Section 602½, manufacturers of toilet soap containing cocoanut oil, and other imported vegetable oils or mixture containing a substantial quantity of such oils, are required to pay the excise tax on such manufacture. When they sell the same soap, the "luxury" tax becomes payable. Manufacturers asked the Bureau if the processing tax might not be credited against the toilet soap sales tax and the Bureau answered in the negative.

TO EXPAND SOAP CODE ASSESSMENTS

A petition to terminate exemption in Par. III of NRA Order X-36, which exempts from assessments under the soap code those manufacturers who are engaged primarily in some other line of business, has been filed with the NRA by the Code Authority of the Soap and Glycerine Manufacturing Industry. The petition asks that any manufacturer who did $25,000 or more in soaps or glycerin in 1933 and whose soap business is 10 per cent or more of his total sales, be assessed under the soap code irrespective of his main line of business. Objections, if any, must be filed with Deputy Administrator J. F. Battley by August 20. The end of this exemption would particularly affect manufacturers of sanitary supplies, disinfectants, polishes, oils, as well as meat packers and renderers who also manufacture soap products.

In an effort to have the now suspended clause placing jurisdiction over the minimum cost of toilet soap reinstated under the retail drug code, the Retail Drug Code Authority in Washington will present to N. R. A. authorities statistics to show that the average cost of soap to the average druggist is no higher than the average cost to the average grocer. This step will be taken when the sixty-day period of suspension of the clause in the retail drug code shall have expired. Suspension of this clause has placed jurisdiction over toilet soap minimums under the retail food code temporarily.

FATTY ACIDS FREE FROM EXCISE TAX

According to John B. Gordon of the Bureau of Raw Materials for American Vegetable Oils and Fats Industries, fatty acids of oils subject to the three-cent excise tax are not taxable whether used before or after May 10. He states: "Fatty acids are not taxable under the provisions of Section 602½ of the Revenue Act of 1934. The specific inquiry which we submitted to the Bureau of Internal Revenue concerned fatty acids made from coconut oil, but the letter of the Treasury Department will apply to fatty acids made from any of the taxable oils. Our inquiry also applied to fatty acids made prior to May 10, the effective date of the Revenue Act. The Bureau of Internal Revenue advises that fatty acids are not taxable, whether made before or after May 10, 1934. We quote from the letter of the Commissioner of Internal Revenue: 'The use of coconut oil fatty acids produced either before or after the effective date of Section 602½ is not taxable under the provisions of such section, irrespective of when so used.'

"It should, of course, be understood that in the case of fatty acids made after May 10 while no tax attaches to the fatty acids themselves, the operation of making fatty acids from coconut oil, palm oil, etc., is taxable as the tax applies against the oil which is processed. The tax does not apply against the oil from which the fatty acids were made if the fatty acids were made prior to May 10.

"If the tax does not apply against fatty acids made in the United States, naturally it cannot apply against fatty acids made outside of the United States, no matter whether they were made before or after May 10. This ruling of the Commissioner of Internal Revenue is of great importance to the oils and fats industry since it means that fatty acids may be imported and used in the production of a manufactured product in the United States without payment of any tax other than the duty of 25 per cent ad valorem which applies against fatty acids in the Tariff Act of 1930. If imported from the Philippines, fatty acids would enter duty free. Consumers of fatty acids who have paid taxes on fatty acids made prior to May 10, when tax returns were filed for May and June, under the misapprehension that these fatty acids were taxable, should be able to obtain a refund on same by filing a claim on form No. 843, which form can be obtained from your local collector of internal revenue and the claim should be filed with him."

Stocks of refined cottonseed oil on hand in United States as of June 30, 1934, totaled 740,720,916 lbs., as compared with 739,406,141 lbs., June 30, 1933. Stocks of crude oil were 45,044,637 lbs., June 30, 1934, as against 63,611,207 lbs., June 30, 1933.

The makers of "Mar-O-Oil" soapless olive oil shampoo, which is being advertised over a Pacific Coast radio hookup, report a thousand per cent sales increase which they attribute directly to radio advertising.

ELECTION SOAP MAKES FRONT PAGE

What was apparently the first attempt to sell a political candidate bars of toilet soap for campaign purposes, recently created quite a stir in the New York daily press. It seems that soap of a patented type carrying an indelible inscription to reelect the candidate in question, was distributed by an enterprising soap manufacturer in the home district of the candidate. The

POLITICAL LATHER

NEWS ITEM:—"Candidates are pictured in soap for clean politics. 'Step on a cake and slip into office' is slogan."

VOTE FOR FUSION
KEEP THE CITY CLEAN
CIVIC VIRTUE
VOTE TAMMANY
SLIPPERY-99 44/100 LYE
VOTE FOR NEW BOND ISSUE
IT FLOATS
LASTING LATHER
VOTE RIGHT SHAVE COST OF GOVERNMENT
Heil Hitler - Our politicians are using soap for campaign literature - why don't you use Limburger for magic propaganda
VOTE FOR ME
SOFT SOAP
TAX PAYER

apparent humor of the thing "took" with the daily press and news stories and cartoons bobbed up here and there. The accompanying cartoon and story appeared in the New York *World-Telegram.*

"Anybody trying to sell Representative Emanuel Celler souvenirs for campaign use will hear the Congressman say, "No soap."

"I want it clearly understood I did not authorize the distribution of any soap with the inscription, 'Reelect Emanuel Celler, U. S. Congressman, Tenth District, N. Y.'" Representative Celler announced today. "My enemies must be trying to get me in bad. I never saw any such soap except a couple of sample pieces, which are still on my desk."

A *World-Telegram* reporter attending the funeral of Frank Incarnato, driver in the Ossining bus accident, in Mr. Celler's Brooklyn district, received a piece of soap so marked from Salvatore Basile, the undertaker, who is active among local Democrats. At Mr. Basile's shop it was explained that he had received a couple of samples in the mail.

"A funeral is not the place for giving out soap," said Representative Celler. "I will conduct my campaign without benefit of soap in any form."

"But the soap is right here," he was told.

"Well," said Representative Celler, "it is unauthorized."

J. B. Furst, president of the Picture Soap Co., of 161 Canal St., which manufactured the soap, refused to be discouraged.

"If Celler doesn't use soap," he said, "somebody else will. He is letting a good thing slip through his hands."

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COLGATE SIX MONTHS NET, $2,416,887

The report of Colgate-Palmolive-Peet Company, and subsidiaries, for the six months ended June 30 shows net profits of $2,416,887, after all charges and provision for taxes, an increase of 215 per cent over the same period last year. This is equal, after preferred dividends, to 84 cents a share on the 1,999,970 shares of no par value common stock outstanding, and compares with net profits of $765,120, or a fraction of a cent a common share earned during the corresponding period of 1933. Net sales of $37,081,211 represent a gain of 18.7 per cent over the first six months of 1933. The company has resumed dividends on its common stock, declaring a dividend of 12½ cents, payable August 1.

"The first half of this year was characterized by rather heavy purchases on the part of distributors in anticipation of higher prices due to the imported oil processing tax," says S. Bayard Colgate, president, in his statement to stockholders. "This tax, which went into effect May 10, imposes a levy of 3 cents per pound on coconut oil, palm oil and certain other foreign oils used in soap making; in some cases it is over 100 per cent of the cost of these oils to the manufacturers.

"Under the circumstances it is obviously impossible for the manufacturers to absorb this tax; it must be passed on, with the result that consumers may have to pay 10 per cent to 25 per cent more for soap depending on the amount of taxable oils used in manufacture. We seriously question the wisdom of any tax which forces everyone in the United States to pay substantially more for a daily necessity at a time when incomes have not increased proportionately. We sincerely trust that at the next session of Congress, action will be taken on the President's special message requesting the repeal of this tax. In the meantime, due to the disturbed conditions which it creates, the outlook for our industry is difficult to predict.

"Colgate-Palmolive-Peet has decided to close its Milwaukee plant. This plant, which served well enough for the manufacture of toilet soaps and toilet articles, is not, due to its location and layout, an efficient one for the production of laundry soap products. The production formerly handled at Milwaukee can be more economically taken care of by our other plants and it is expected that the Milwaukee operations will be discontinued before the end of the year."

P. & G. NETS $2.09 PER SHARE

Procter & Gamle Co. and subsidiaries report earnings for the year ended June 30, 1934, of $14,370,066, equal after preferred dividends to $2.09 per share on the outstanding common stock. This is an increase of $3,588,741, or approximately 33 per cent over the previous twelve months' period, when earnings of $10,811,325, or $1.52 per share, were reported. The gross sales for the year were $116,593,143, an increase of 13.79 per cent. and tonnage was up 17 per cent. In the quarter ended June 30, 1934, the company accumulated 84,913 shares of common stock and 2,052 shares of 5 per cent preferred in relieving employes of stock purchase obligations, transferring the money involved from its investment account to its treasury account. This retirement of stock reduces the outstanding common shares from 6,410,000 to 6,325,087 and the 5 per cent preferred from 171,569 to 169,517. The net per share of $2.09 is based on the average number of common shares outstanding for the year.

RULE IN "MOUSE SEED" LITIGATION

W. G. Reardon Laboratories, Inc., Port Chester, N. Y., advises that the United States Circuit Court of Appeals, Fourth Circuit, in a decision confirmed July 16, has ruled that B. & B. Exterminators, Inc., are enjoined from any further use of trademarks "Mouse Seed," "Mouseed," "Rat Seed" and "Ratceed." The first decision had held certain packages used by the defendant to be competitively unfair, but had denied the plaintiff's right to register as valid trademarks the words, "Rat Seed" and "Mouse Seed." In reversing this decision, allowing the marks as valid and enjoining the defendant from their further use, the appeals court ruled as follows:

"Such words, if descriptive only, will not be valid as a trademark if reasonably indicative of the general nature or character of the article. But, however, if the words are merely suggestive of the character of the goods or the properties which the users of the mark wish the public to attribute to them and not merely descriptive, the mark will be good. The only question in this case, as to the trademark is whether it is descriptive only and not susceptible of exclusive appropriation or whether it is uniquely suggestive. When the two words are coupled together to make 'Mouse Seed' there is no immediate meaning conveyed but a suggestion to the mind as to what the term could mean and the two words used in conjunction case to be descriptive and become suggestive. Mature thought would probably lead to but one conclusion—that a mouse poison was indicated—but it requires thought to reach this conclusion. The words used together possess an element of incongruity which make them unusual and unique and therefore, in our opinion, a valid trademark. In addition to this some weight must be given to the fact that the patent office registered 'Mouse Seed' as a trademark showing that it was considered susceptible of appropriation as a mark."

SOAP STOCKS REPORTED HEAVY

Distribution of soap from jobbers to consumers has slowed up to such an extent that unusual and special efforts are being made to move the accumulation, according to news reports. Retailers in many instances are quoting soaps at bargain prices, while some manufacturers are reported as offering greater inducements in the form of prizes and premiums. Jobbers' stocks of soap in the meanwhile are reputed to be heavy.

Soap makers state that the heavy stocks manufactured and moved into jobber hands before the excise tax became effective are not being liquidated as desired. It is pointed out that higher raw material prices since imposition of the tax in May have increased production costs so that price schedules, generally, have been raised. Nevertheless, stocks in jobbers' hands are moving very slowly, and it is in an effort to increase distribution that price-cutting and prize incentives are being tried. Oneida Community, Ltd., Oneida, N. Y., manufacturers of silverware, has received what is reported as the largest order in its history for plated tableware from a well-known soap manufacturer, the silver to be given away as premiums with soap purchases.

EXTERMINATORS TO MEET IN ST. LOUIS

The National Association of Exterminators & Fumigators, Inc., will hold its second annual national convention in St. Louis, October 1-2-3, at the Statler Hotel. There will be three full days and nights of business and pleasure to make it worth while for any one in the exterminating, fumigating or pest control service of any kind to attend. All are invited to attend but the purely business sessions of the convention will be open only to members of the National Association. Hearings and discussions on the subjects of insurance, trade practices, national code and legislation, etc., will be an important part of the convention business and all members of the trade whether or not members of the National Association are invited to take part. Excellent speakers with first hand knowledge of the problems of the industry are on the program. Latest methods, important developments as an outgrowth of constant research and other interesting facts will be presented. There will be plenty of entertainment for the wives who accompany their husbands. The first week of October of each year is known to all St. Louisans as the holiday week on account of the Veiled Prophet's annual visit to the city. An enjoyable time will be experienced by every one visiting St. Louis at this time.

Julius Schaal, well-known German soap chemist, is offering a new rapid saponification process for use by American manufacturers. He states that the time for complete saponification is only thirty minutes using only crutchers, and that a 250-gal. crutcher can produce ten to twelve thousand pounds of finished soap per day. He states that the soap base is suitable for use in any type of soap.

SOAP presents a *perfuming problem* of a special character. To handle it successfully requires intimate knowledge of soap manufacturing and, above all, experience with soap perfumes.

We have done a considerable amount of work along those lines, and offer several series of soap perfumes of *tried worth.*

Send for *smelling samples.*

Almond	Lemon
Almond—Rose	Lilac
Almond—Cocoa	Lily
Antiseptic Odor	Mint
Bouquets of great variety	Narcissus
Carnation	Orange
Cedar	Oriental
Citrella	Patchouly
Cologne	Pine
Fougere	Pineapple
Gardenia	Rose
Geranium	Sandalwood
Girella	Sweet Pea
Jasmin	Verbena
Lavender	Violet

Also many odors for shampoo and liquid soap

van Ameringen-Haebler, Inc.

Aromatic Essentials

315 Fourth Avenue, New York
180 No. Wacker Drive, Chicago
438 West 48th St., Los Angeles
42 Wellington Street, E., Toronto

Factory, Elizabeth, N. J.

PERSONAL AND IMPERSONAL

Herbert G. French, executive vice-president of Procter & Gamble Co., has been elected a director of the Cincinnati, New Orleans and Texas Pacific Railway, filling the vacancy caused by the death of Colonel William Cooper Procter.

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N. N. Dalton, director of research for the Glycerine Producers Association, and former vice-president in charge of production for the Colgate-Palmolive-Peet Co. returned from Europe late in July after an extended survey of glycerin conditions abroad.

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Acting on medical advice, John McDowell, has retired from the boards of Unilever, Ltd., and Lever Bros., Ltd. of London. His successor on these boards has not yet been appointed. Mr. McDowell, who is well-known in the British soap industry, has been in poor health for some time.

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Herbert H. Krause Sales Agency, Pittsburgh, will handle distribution of "Marchand's" castile soap, "Golden Hair Wash" and "Dame Nature" lotions in the Pittsburgh and western Pennsylvania territories.

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F. H. Oxford has been named Washington representative for Lever Bros. Co. and will make his headquarters at the company's branch office in Seattle. He was previously connected with the San Francisco office.

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Hull Soap Co., Hull, Que., Canada, has been incorporated with a capitalization of $20,000 to manufacture soaps, glycerin, toilet goods, shellac, varnish, etc.

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Bristol-Myers Company are making and packaging Ipana tooth paste at "A Century of Progress," Chicago, again this year. They are located in General Exhibits Building No. 4, where one of Jones latest model Constant Motion Cartoners may be seen packaging Ipana at any speed from 30 up to 150 cartons per minute.

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How, when and where to use soap in keeping the human body clean was the subject of an interesting article in the *Evening Star* of Washington, D. C. on July 16 by Charles E. Tracewell. For a hot weather "cooling system" for the body, Mr. Tracewell recommends frequent baths with plenty of soap suds repeated at frequent intervals as a means of removing the oil constantly deposited on the skin by perspiration.

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Philadelphia Quartz Company announces the promotion of Carl F. Wolcott, assistant sales manager, to a new post at the head office at Philadelphia, Pa. Mr. Wolcott will have entire supervision of the company's field force as well as the development of its distribution of miscellaneous stock through jobbers. With the transfer of Mr. Wolcott, the Chicago office will be somewhat reduced in size, but will remain available for the service of the trade.

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L. Pasternak Co., New York, has taken over the business formerly conducted by C. B. Peters Co., New York, internationally known glycerin brokers. Leo Pasternak who has actively managed the C. B. Peters Co. for the past seven years will continue personally to operate the company.

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Fels & Co., Philadelphia, has reduced the workweek in its soap plant from five and one-half to five days, retaining the wages previously paid for the longer period. A personal letter of congratulation has been forwarded to Samuel S. Fels by Administrator Hugh S. Johnson.

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Francois Coty, internationally known perfume manufacturer and publisher, died in Paris, July 25. He was sixty years old and a native of Corsica. For many years he has been president of Coty, Inc., and has also been active in French political circles. Some time ago he bought the conservative newspaper, *Figaro*, and in recent years has devoted much of his time to publishing.

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Albert A. Nudelman has filed incorporation papers for Grand Soap & Chemical Co., 175 Varick Ave., Brooklyn.

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Edgar M. Queeny, president of the Monsanto Chemical Co., returned to the United States aboard the *Bremen* on August 2 after a month spent in Europe on business.

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Davies-Young Soap Co., Dayton, O., announce that W. J. McCarron is now representing them in New England and Eastern New York. His headquarters are in Boston.

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Riebe Soap & Chemical Works, Seattle, has recently changed its name to Riebe-Continental Chemical Co. The organization is now under the direction of H. G. Behneman following the death of Marie J. Riebe, former owner.

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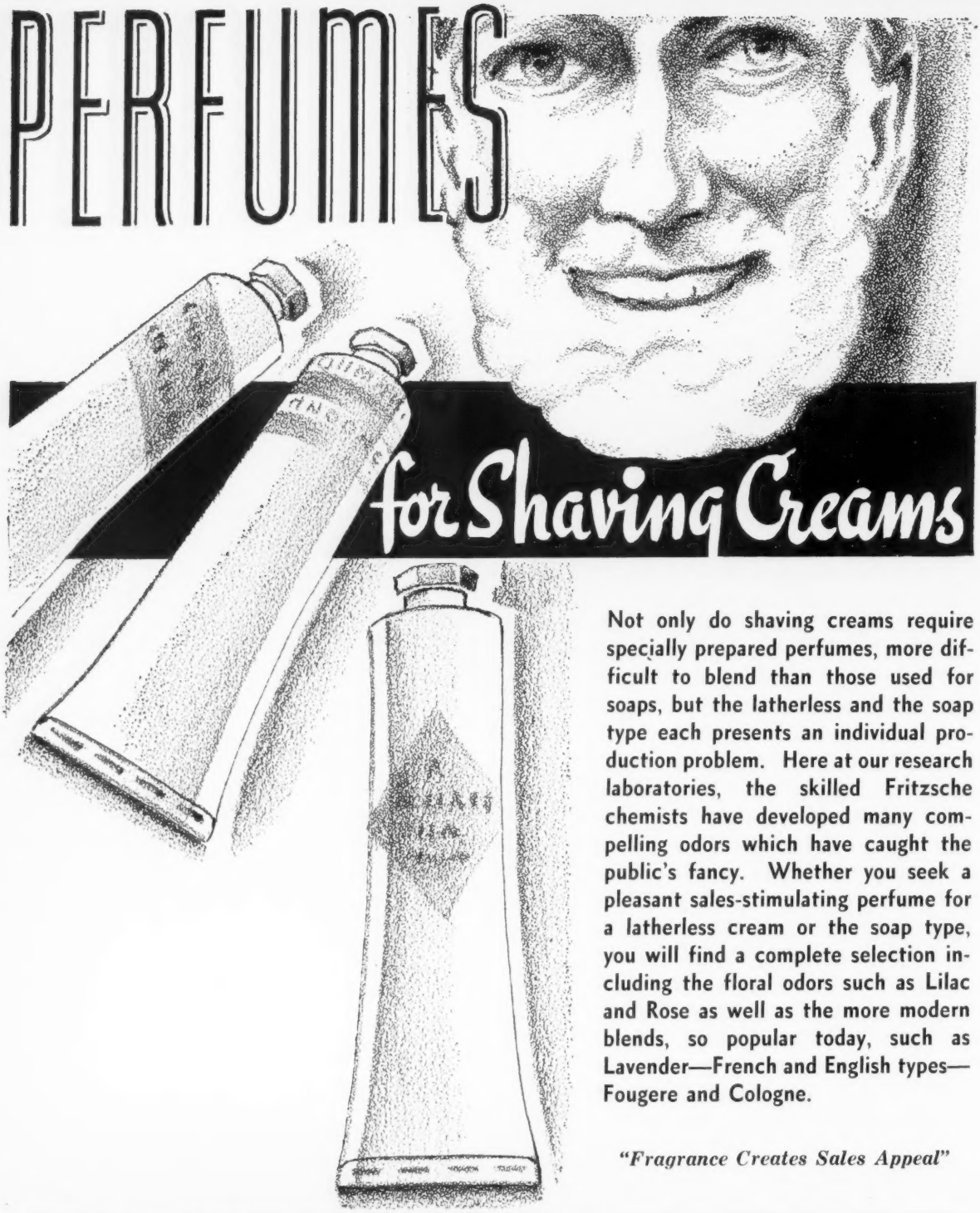
John R. Kennedy, United Drug Co., Ltd., Toronto, has returned with Mrs. Kennedy and their son from a seven weeks European trip.

PERFUMES



for Shaving Creams

Not only do shaving creams require specially prepared perfumes, more difficult to blend than those used for soaps, but the latherless and the soap type each presents an individual production problem. Here at our research laboratories, the skilled Fritzsche chemists have developed many compelling odors which have caught the public's fancy. Whether you seek a pleasant sales-stimulating perfume for a latherless cream or the soap type, you will find a complete selection including the floral odors such as Lilac and Rose as well as the more modern blends, so popular today, such as Lavender—French and English types—Fougere and Cologne.

"Fragrance Creates Sales Appeal"

FRITZSCHE *Brothers, inc.*

164 SO. CENTRAL AVENUE, LOS ANGELES, CAL.

Proprietors of PARFUMERIES de SEILLANS, Seillans, France
FRITZSCHE BROTHERS, of Canada, Ltd., 77-79 Jarvis St., Toronto, Canada

78-84 BEEKMAN STREET
NEW YORK, N. Y.
118 WEST OHIO ST. CHICAGO, ILL.

"Fairy" soap which has been conspicuously absent from national advertising over the past twelve years is again to take a prominent place in the soap advertising picture according to plans of the maker, Gold Dust Corporation. A test campaign is now being conducted in Baltimore which involves large newspaper space, free samples, dealers stocks, etc. Advertising copy emphasizes the all-purpose nature of the new "Fairy" soap.

A concentrated advertising campaign through newspaper mediums is being schedule by Colgate-Palmolive-Peet Company for "Colgate Ribbon Dental Cream." "Brighter smiles" is to be the keynote of the campaign which will spotlight the testimony of Hollywood directors, beauty experts, psychologists and chemists to demonstrate that white teeth are the first essential of beauty. Colgate's "Seven Stain" story will be stressed.

E. H. Little, vice-president of Colgate-Palmolive-Peet Co., returned on the Europa, July 23, from a month's trip to Europe. Mr. Little is at present director of sales and advertising for Colgate-Palmolive-Peet and previously was manager of the foreign territory.

Bon Ami Co. and subsidiaries earned net profit of $544,620 during the six months ended June 30, equal to $2.69 a share on class A stock and $1.55 a share on class B. For the same period in 1933 earnings were $543,977, equal to $2.47 on class A and $1.48 on class B.

The firm of R. L. Watkins Co., Newark, N. J., maker of "Mulsified Cocoanut Oil Shampoo," "Dr. Lyons" tooth powder, and "Glostora," is being taken over by Sterling Products, Inc., New York, manufacturer of pharmaceuticals. It is understood the company was acquired for cash.

Benton & Bowles recently released in the *Saturday Evening Post* the first magazine advertisement on "Cashmere Bouquet" soap since the merger of Colgate-Palmolive-Peet Co. in 1928. This is to be followed shortly by space in *Good Housekeeping* and a number of motion picture magazines. The price has recently been reduced from 25c. to 10c. per cake.

The firm of Minakata & Co., S. A., has been formed in Guadalajara, Jal., Mexico, to do business in soaps and oils. They will manufacture "La Crisantema" soap and will also do an export and import business in soaps and oils. Jesus Minakata, Sr., heads the new concern as managing director.

Procter & Gamble Co., Cincinnati, has increased the profit sharing dividend rate on stock purchased by its employees from a flat 8 per cent to a sliding scale of from 5 to 15 per cent. Employees who have been receiving the 8 per cent rate will not be reduced, regardless of length of service, but if they have been in the company's employ for more than six years they will automatically benefit by the increased rate.

Picture Soap Co., recently incorporated, has leased manufacturing space at 159-165 Canal St., New York.

Chemical Brands, Inc., Brooklyn, manufacturer of toilet articles, barber supplies, etc., plans issuance of 100,000 shares of common stock at $2.75 per share, the proceeds to be used for working capital.

Benjamin E. Levy has recently been returned to the position of chairman of the board of Coty, Inc., New York. In this position he will direct the Coty organizations both in United States and abroad.

Procter & Gamble Co. is offering a thousand dollar a year annuity as grand prize to go to the writer of the best letter on the subject, "Why Camay Is The Best Beauty Soap For My Skin." A national advertising campaign is being linked with the contest.

Four additional members have been elected to the Code Authority for the Perfume, Cosmetic and Other Toilet Preparations Industry in addition to the three first chosen, Ralph H. Aronson, Frederick N. Dodge and Charles S. Welch. The new members are: Richard A. Clark, representative of the manufacturing beauty and barber supply industry; Howard S. Lyon, representative of manufacturers of private brands and firms selling to syndicates; Jean Despres, representative of firms whose sales exceeded $500,000 in 1933; and H. Clyde Balsley, representative of firms whose sales were $500,000 or less in 1933. The Code Authority has established offices at 10 East 40th St., New York.

Net income of Continental Can Company, for the twelve months ending June 30, 1934 amounted to $13,154,973 which, after providing $4,095,311 for depreciation and Federal taxes, left net earnings available for the common stock of $9,059,662, equivalent to $5.16 a share on 1,755,689 common shares.

Gibson-Howell Co., cosmetics and pharmaceuticals, Jersey City, N. J., which went into bankruptcy, is being reorganized under the terms of the new Federal bankruptcy regulations. The company reports partially frozen assets of $278,802 and liabilities of $174,121.

George V. Sheffield, senior vice-president and treasurer of Innis, Speiden & Co., New York, died July 19 after a brief illness. Mr. Sheffield has been active in the firm since 1878.

Paul A. Todd, vice-president of A. M. Todd Co., Kalamazoo, Mich., is a candidate for Congress from the third Michigan district.

A MODERN VERSION OF AN OLD STAND-BY

FIRST on the field among metal closures, the screw type of cap has had long and deserved popularity. And now along comes Anchor with some new ideas incorporated in this old favorite to increase its appeal and its efficiency. The improved Anchor C. T. B. Cap is a screw cap with its face lifted and generally rejuvenated.

It presents a handsomer appearance because of its new design, its nice proportions and its clean, sturdy, business-like lines. It does a better job of sealing because of a number of structural improvements: the inverted bead in the top, the narrowed band of knurling, the broadly rounded and accurately pitched thread, as well as other mechanical features we will be glad to tell you about in detail.

As a result of its beauty treatment and its greater sealing proficiency, the Anchor C. T. B. Cap is adapted to all sorts of products—polishes, cleaners, chemicals, insecticides and many others—a representative group of which is shown below. Write us for full details of its advantages as they apply to the products you make.

ANCHOR CAP & CLOSURE CORPORATION
LONG ISLAND CITY, N. Y. TORONTO, CANADA

Branch Offices: ATLANTA • BOSTON • CHICAGO • CLEVELAND • DETROIT HOUSTON • LOS ANGELES • LOUISVILLE • MONTREAL • NEW YORK • PHILADELPHIA • PITTSBURGH • ROCHESTER • SAN FRANCISCO • ST. LOUIS • TORONTO

ANCHOR CLOSURES FOR POLISHES & SPECIALTIES

RECORD OF TRADE-MARKS

The following trade-marks were published in the July issues of the *Official Gazette* of the United States Patent Office in compliance with Section 6 of the Act of September 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of publication. As provided by Section 14, fee of ten dollars must accompany each notice of opposition.

TRADE MARKS FILED

JODIK—This in outline letters describing soap powder. Filed by Strong, Carlisle & Hammond Co., Cleveland, Apr. 16, 1934. Claims use since Sept. 22, 1933.

HY-PRO—This in solid letters describing detergent and cleanser. Filed by Hygienic Products Co., Canton, Ohio, Apr. 19, 1934. Claims use since April, 1933.

CLEAN—This in outline script together with sketch of woman cleaning wallpaper, describing wall paper cleaning preparation. Filed by Omar Chemical Co., Columbus, Ohio, May 2, 1934. Claims use since Feb. 1, 1932.

CANDO—This in solid letters describing cleaning preparation. Filed by Cando Corp., Cambridge, Mass., May 10, 1934. Claims use since May 1, 1895.

NOXON—This in solid letters describing liquid in which insecticidal and germicidal are dissolved for spraying. Filed by Noxon Chemical Products Co., Newark, Apr. 19, 1933. Claims use since Jan. 1, 1926.

O-RAL-TINE—This in script describing mouth wash and antiseptic. Filed by Oraltine Co., New Orleans, Jan. 17, 1934. Claims use since June 12, 1932.

MURDIRMOTH—This on oval-shaped reverse plate describing moth preparation. Filed by Murdirco, Inc., Los Angeles, Apr. 17, 1934. Claims use since January, 1932.

MURDIRAT—This on oval-shaped reverse plate describing rodent exterminating preparation. Filed by Murdirco, Inc., Los Angeles, Apr. 17, 1934. Claims use since January, 1932.

MURDIRBUG—This on oval-shaped reverse plate describing insecticide. Filed by Murdirco, Inc., Los Angeles, Apr. 17, 1934. Claims use since January, 1932.

MOTH KING—This in solid letters with sketch of moth describing moth-proofing liquid. Filed by Moth King Corp., Chicago, Apr. 28, 1934. Claims use since Feb. 15, 1934.

ENO—This in solid letters describing cleaner. Filed by Eno Cleaner Co., Worcester, Mass., May 11, 1934. Claims use since Oct. 11, 1933.

PUROX—This on reverse plate superimposed on rhombic figure, describing cleanser, deodorant, disinfectant, etc. Filed by Purox Chemical Co., New York, Dec. 29, 1933. Claims use since Dec. 22, 1933.

VITALITE—This in solid letters describing shampoo. Filed by All-American Chemical Products Co., Los Nietos, Cal., Apr. 27, 1934. Claims use since Mar. 4, 1934.

EASTERN STATES—This in solid letters on figure resembling horseshoe. Filed by Eastern States Farmers' Exchange, West Springfield, Mass., Apr. 28, 1934. Claims use since Apr. 5, 1934.

POWDEX—This in solid letters describing antiseptic powders. Filed by Sci-Medico, Inc., New York, Apr. 28, 1934. Claims use since July 22, 1933.

HANDI-PAX—This in broken letters describing insecticides. Filed by Union Oil Company of California, Los Angeles, May 22, 1934. Claims use since Apr. 25, 1934.

KREX—This in solid letters pierced by arrow, describing shaving cream. Filed by Krex Co., Los Angeles, May 8, 1934. Claims use since Mar. 28, 1934.

SPIX—This in solid letters describing cleaning preparation. Filed by Jackson Products Co., Pittsburgh, May 9, 1934. Claims use since Apr. 17, 1934.

FAIRYBOWL—This in solid letters describing closet bowl cleaner. Filed by Farilene Co., Jackson, Mich., Nov. 6, 1933. Claims use since Oct. 11, 1933.

O D—This in solid letters describing insect powders. Filed by Goldwin Smith, Tampa, Fla., May 7, 1934. Claims use since May 4, 1934.

TABS-O-DENT—This in solid letters describing tooth powder. Filed by Woodbury-Reynolds, Inc., Newton, Mass., May 26, 1934. Claims use since Mar. 1, 1934.

AIRTOX—This in solid letters describing insecticides. Filed by Derris, Inc., New York, June 1, 1934. Claims use since May 22, 1934.

E F B—This in solid letters describing insecticide. Filed by E. F. B. Laboratories, Kansas City, Mo., June 4, 1934. Claims use since May 23, 1934.

BART—This in script describing shaving soap. Filed by Kempton Corp., Westport, Conn., Apr. 11, 1934. Claims use since Feb. 26, 1934.

"PEPSET"—This in outline letters describing shaving cream. Filed by John P. Moore, Sulphur, Okla., May 4, 1934. Claims use since Jan. 5, 1933.

GLO-KLEAN—This in shaded letters describing polish and cleaner. Filed by Lewis Products Co., New York, May 18, 1934. Claims use since May 1, 1934.

TRIAD—This in solid letters describing detergent and cleaning compound. Filed by Rex Products & Mfg. Co., Detroit, May 19, 1934. Claims use since Apr. 3, 1931.

KLEENITE—This in solid letters with sketch of glass, describing artificial teeth cleaning compound. Filed by

Kleenite Laboratories, Buffalo, N. Y., May 24, 1934. Claims use since Feb. 27, 1934.

SIB—This in shaded letters describing cleaner and disinfectant. Filed by Strong, Carlisle & Hammond Co., Cleveland, Apr. 9, 1934. Claims use since Sept. 22, 1933.

CITRUS ZEE—This in solid letters describing insecticide and fungicide. Filed by George Leone, Lakeland, Fla., May 16, 1934. Claims use since Nov. 1, 1932.

BUCKEYE ANTUBE—This in solid letters together with sketch of ant describing insect-exterminating compounds. Filed by Harry M. Epstein, New York, May 24, 1934. Claims use since August, 1933.

GLO-SHENE—This in solid letters describing shampoo. Filed by Specialty Laboratories, Inc., Chicago, June 6, 1934. Claims use since Dec. 27, 1933.

MELLOCRAFT—This in outline letters describing cleaning compound. Filed by Mellocraft Corp., Toledo, May 13, 1933. Claims use since Jan. 18, 1933.

SUPREME—This in solid letters describing polish and cleaner. Filed by Western Auto Supply Agency of Los Angeles, Los Angeles, June 11, 1934. Claims use since May 15, 1933.

POISE—This in solid letters describing soaps and shaving cream. Filed by Yardley of London, Inc., Union City, N. J., June 14, 1934. Claims use since Jan. 11, 1934.

JA PO—This in solid letters with sketch of insect describing exterminating preparation. Filed by Edward Potter, Wilmington, May 26, 1933. Claims use since Apr. 14, 1933.

TRADE MARKS GRANTED

314,501. Furniture and Automobile Polish. C E B Manufacturing Corporation, Jacksonville, Fla. Filed December 27, 1933. Serial No. 345,370. Published April 24, 1934. Class 16.

314,504. Insecticides, Deodorants, etc. W. T. Rawleigh Co., Freeport, Ill. Filed January 8, 1934. Serial No. 345,789. Published May 1, 1934. Class 6.

314,594. Latherless Shaving Cream. Kennedy Products Co., Kokomo, Ind. Filed November 7, 1933. Serial No. 343,350. Published April 24, 1934. Class 4.

314,603. Tooth Paste. J. R. Brundage, Inc., New York. Filed October 11, 1933. Serial No. 342,334. Published December 19, 1933. Class 6.

314,621. Shampoos. National Oil Products Co., Harrison, N. J. Filed June 8, 1933. Serial No. 338,662. Published March 13, 1934. Class 6.

314,622. Germicides. Consolidated Guardian Chemical Co., Phoenix, Ariz. Filed May 17, 1933. Serial No. 337,913. Published April 17, 1934. Class 6.

314,623. Mouth Wash. R. L. Watkins Co., New York. Filed May 11, 1933. Serial No. 337,714. Published April 17, 1934. Class 6.

314,655. Roach Powder. Danwall Manufacturing Co., New Orleans. Filed February 4, 1933. Serial No. 334,635. Published May 1, 1934. Class 6.

314,657. Roach Powder. Danwall Manufacturing Co., New Orleans. Filed February 4, 1933. Serial No. 334,634. Published May 1, 1934. Class 6.

314,682. Insecticides. Jungmann & Co., New York. Filed February 3, 1934. Serial No. 346,937. Published April 24, 1934. Class 6.

314,691. Shoe Polishes and Dressing. Shu-Milk Products Corp., Orange, N. J. Filed March 6, 1934. Serial No. 348,254. Published April 24, 1934. Class 4.

314,698. Disinfectants and Insecticides. Shores Co., Cedar Rapids, Ia. Filed March 13, 1934. Serial No. 348,562. Published May 1, 1934. Class 6.

314,768. Mineral Oil for Insect Control. L. Sonneborn Sons, Inc., New York. Filed February 7, 1934. Serial No. 347,092. Published May 1, 1934. Class 6.

314,782. Shampoo. L. Sonneborn Sons, Inc., New York. Filed February 7, 1934. Serial No. 347,093. Published May 1, 1934. Class 6.

314,821. Soap. Procter & Gamble Co., Cincinnati. Filed March 13, 1934. Serial No. 348,556. Published May 1, 1934. Class 4.

314,870. Polishes. Pall Mall Mfg. Co., Brooklyn. Filed March 24, 1934. Serial No. 349,095. Published May 1, 1934. Class 16.

315,034. Water Softener and Cleanser. Midwest Chemical Corp., Milwaukee. Filed January 15, 1934. Serial No. 346,074. Published May 8, 1934. Class 6.

315,037. Toilet Bowl Cleaner. Pioneer Chemical Co., Alton, Ill. Filed December 26, 1933. Serial No. 345,357. Published May 8, 1934. Class 4.

315,051. Cleaner and Detergent. Paper Makers Chemical Corp., Wilmington. Filed December 6, 1933. Serial No. 344,543. Published May 8, 1934. Class 4.

315,059. Polish. W. T. Grant Co., New York. Filed October 30, 1933. Serial No. 343,037. Published May 15, 1934. Class 16.

315,104. Brushless Shaving Cream. Theodore G. Richert, Nutley, N. J. Filed January 12, 1933. Serial No. 333,865. Published May 8, 1934. Class 4.

315,116. Polish. Metzerott Corp., New York. Filed May 25, 1933. Serial No. 338,228. Published May 15, 1934. Class 16.

315,134. Liquid Polishing Waxes. D. A. Collins Mfg. Co., Brooklyn. Filed March 16, 1934. Serial No. 348,694. Published May 8, 1934. Class 16.

315,135. Liquid Polishing Waxes. D. A. Collins Mfg. Co., Brooklyn. Filed March 16, 1934. Serial No. 348,695. Published May 8, 1934. Class 16.

315,136. Liquid Polishing Waxes. D. A. Collins Mfg. Co., Brooklyn. Filed March 16, 1934. Serial No. 348,696. Published May 15, 1934. Class 16.

315,147. Floor Wax and Polish. Herman Ahlgren, San Francisco. Filed March 31, 1934. Serial No. 349,353. Published May 8, 1934. Class 16.

315,153. Toilet Soap. Colgate-Palmolive-Peet Co., Jersey City, N. J. Filed March 24, 1934. Serial No. 349,070. Published May 8, 1934. Class 4.

GERMICIDAL DETERGENTS

(*From Page* 19)

stable as to make them unsuitable, or their oxidizing ability was so diminished as to make them inefficient.

As a result of this survey, we came to the conclusion that compounds which are germicidal exert their efficiency only in the unionized state (14). Others in recent years have come to the same conclusion (15). Anything which increases the degree of ionization appears to diminish the germ killing power. Unfortunately, practically all compounds which are toxic to bacteria form salts in alkaline solutions, and it may be that the higher degree of ionization is responsible for the diminished activity. Of course there may be exceptions in the case of salts of heavy metals, but these are eliminated because of their insolubility. It appears that the only possibility of obtaining a highly efficient compound toxic to bacteria in alkaline solution is to find an organic base whose ionization will be depressed in the presence of alkalies. We have been unable to find a suitable compound of this type. The only avenue left, therefore, was to try to make the hydroxyl ions themselves more toxic by the use of soaps. Previous workers have shown that surface tension depressants, particularly soaps, will enhance the germicidal properties of certain compounds (16). It seemed reasonable, therefore, to assume that the soaps might have a similar effect upon the alkalies. We consequently investigated the effect of a combination of these two. The data given below indicate the results.

For this work it was necessary to determine the lethal concentrations of the alkalies themselves against our test organisms. The results are given in table III.

Table III.

The Germicidal Value of Alkalies
5 min. at 37.5°C.

pH	*Alkali*	*Plate Count*
7.0	Phosphate buffer	640,000
7.8	Phosphate buffer	580,000
8.4	Phosphate buffer	520,000
8.8	Phosphate buffer	400,000
11.2	Sodium carbonate	300,000
11.9	Trisodium phosphate	120,000
11.2	Caustic soda	5,000
12.6	Caustic soda	1,000
12.7	Caustic soda	100
12.8	Caustic soda	50
13.0	Caustic soda	0

It appears that the germicidal efficiency varies with the different alkalies, even though the pH is approximately the same. Also, it seems evident from our data that to sterilize a culture of Staphylococcus aureus in 5 minutes at 37.5°C., a pH of 13 or higher is required. At a pH between 11.5 and 12, regardless of what alkali is used, there still remains a large number of viable organisms after the 5 minute exposure. We therefore selected this pH range for the study of soaps, in order to determine whether a combination of soap and alkali would render such solutions germicidal.

We next tested varying concentrations of different soaps against our test organism. The results are given in table IV.

Table IV.

The Effect of Soaps on *Staphylococcus aureus*
5 min. at 37.5°C.

Soap	*Concentration*	*Plate Count*
Sodium oleate	0.1%	10,000+
Sodium oleate	1.0	10,000+
Sodium oleate	2.5	10,000+
Sodium oleate	5.0	10,000+
Sodium ricinoleate	0.1	10,000+
Sodium ricinoleate	1.0	10,000+
Castile soap	0.1	10,000+
Castile soap	2.0	10,000+
Coconut oil soap	0.1	10,000+
Coconut oil soap	1.0	10,000+
Sodium stearate	0.1	10,000+
Sodium stearate	1.0	10,000+
Sodium laurate	0.1	10,000+
Sodium laurate	1.0	10,000+
Sodium resinate	0.1	10,000+
Sodium resinate	0.2	10,000
Sodium resinate	1.0	100
Sodium resinate	2.5	10
Sodium resinate	5.0	0

(*To be concluded in next issue.*)

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(*Turn to Page* 53)

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CONTRACTS AWARDED

Colgate-Palmolive-Peet Co. has been awarded a contract for 16,250 cakes of toilet soap for the Brooklyn U. S. Army Quartermaster at a price of 9-10c. Also awarded 13,500 cakes for Philadelphia at $.0092; 37,250 cakes for Chicago at 1.025c; 6,500 cakes for San Antonio at 1.125c, and 8,000 for San Francisco at 1.2c.

Trade Laboratories has been awarded the following contracts for tooth paste for the Brooklyn U. S. Army Quartermaster: 16,750 tubes for New York at 4.12c; 2,000 for Philadelphia at 4.27c; 37,250 for Chicago at 4.23c; 5,000 for San Antonio at 4.72c, and 6,000 for San Francisco at 4.92c.

In a recent U. S. Quartermaster's bidding at Chicago, Armour & Co. was awarded 1,000 cakes toilet soap at 2.04c. Hunnewell Soap Co., Cincinnati, awarded 1,700 cakes grit soap at 2.1c; 1,500 at 2.5c; 200 at 2.35c, and 6,200 at 2c. John Sexton & Co., Philadelphia, awarded 100 cakes grit soap at 2.44c; 100 at 2.46c; 100 at 2.35c; 300 at 2.8c, and 1,100 at 2.48c. Day & Frick, Philadelphia, awarded 100 cakes grit soap at 3.5c; 300 at 3.35c, and 600 at 2.8c. Colgate-Palmolive-Peet Co., Jersey City, awarded 360 lbs. laundry soap at 2.725c; 5,580 lbs. at 2.705c; 17,400 lbs. at 2.63c; 10,200 lbs. at 2.81c, and 900 lbs. at 3.32c. Samuel M. Sher, Chicago Heights, awarded 12,000 lbs. laundry soap at 3.09c; 60 lbs. at 2.784c; 2,400 lbs. at 2.674c; 1,000 lbs. at 2.654c; 45,000 lbs. at 2.42c; 24,840 lbs. at 2.6c; 5,880 lbs. at 3.48c; 19,860 lbs. at 3.54c, and 36,000 lbs. at 2.64c.

General Soap Co., San Francisco, received the following awards in a recent Indian Service bidding in St. Louis: 18,600 lbs. laundry soap, 2.3c; 12,350 lbs. toilet soap, 4.85c; 50 lbs. hard water toilet soap, 2.9c; 4,500 lbs. soap chips in 50-lb. cartons, 4.8c; 900 lbs. same in 100-lb. cartons, 4.7c; 10,250 lbs. same in barrels, 4.6c; 600 lbs. powdered laundry soap in 50-lb. cartons, 2.2c, and 825 lbs. scouring powder in bbls., 1.8c.

Kirkman & Son, Brooklyn, awarded 890 lbs. laundry soap at 2.47c; 2,066 lbs. toilet soap at 4.43c, and 4,250 lbs. soap chips in barrels at 4.875c. Colgate-Palmolive-Peet Co., Jersey City, awarded 84,190 lbs. laundry soap at 2.517c; 66,980 lbs. at same figure; 24,850 lbs. soap chips in 50-lb. cartons at 5.225c; 28,710 lbs. in 100-lb. cartons at 5.225c; 242,950 lbs. in barrels at 4.975c; 16,400 lbs. powdered laundry soap in 50-lb. cartons at 2.27c, 14,100 lbs. scouring powder in 50-lb. cartons at 1.59c, and 8,975 lbs. in barrels at 1.34c. Haskins Bros. & Co., Omaha, awarded 86,121 lbs. toilet soap at 4.65c.

Newell-Gutradt Co., San Francisco, awarded 28,700 lbs. toilet soap at 6.235c, and 4,889 cakes grit soap at 2.9c. S. E. Rykoff & Co., Los Angeles, awarded 18,100 lbs. powdered laundry soap in barrels at 1.92c. Mt. Hood Soap Co., Portland, awarded 7,750 lbs. soap chips in barrels at 4.75c. Swift & Co., Chicago, awarded 7,640 lbs. hard water toilet soap at 2.46c. Conray Products Co., New York, awarded 18,600 lbs. soap chips in 100-lb. cartons at 4.73c, and 1,650 lbs. in 50-lb. cartons, at 4.73c. Sierra Nevada Soap So., Reno, awarded 6,550 lbs. soap chips at 5c. DuBois Soap Co., Cincinnati, awarded 15,125 lbs. powdered laundry soap in bbls. at 1.4c; 6,850 lbs. in 50-lb. cartons at 1.97c; 7,625 lbs. scouring powder in bbls. at $.0095 and 950 lbs. in 50-lb. cartons at 1.4c. Jas. Good, Phila., awarded 352 cakes grit soap at 3.4c.

A new device for the application of caps to bottles, cans, etc., which the maker states costs only a quarter to a tenth as much as ordinary capping equipment, is

being marketed by the Ludcke Company of Newton, Mass. under the name of The Herndon Capper. The maker announces that the device will handle any cap that turns on any type of container, that it will do up to 100 per minute, that it gives uniform and air-tight sealing, and that no skill is required to operate it. The machine is portable and can be transferred from one place to another by merely unplugging the connection.

Market Report on

TALLOW, GREASES, AND OILS

(*As of August* 8, 1934)

NEW YORK—The effect of the devastating western drought was felt this month as an additional factor tending to force the prices of domestic oils and fats higher. This combined with the excise tax to alter sharply the recent positions of domestic and imported fats. Tallow moved higher again this period as did the greases and such domestic oils as corn and cottonseed. Coconut oil, on the other hand was unchanged in price, and palm oil was again fractionally lower. Buying is still reported as moving at a slow pace. It seems that soap makers still refuse to admit the reality of the excise tax and are postponing buying as long as possible. Of course most of them have substantial stocks, both of raw materials and finished soap, which were laid in in anticipation of the tax.

Coconut Oil

Coconut oil was quiet and unchanged in price this period, holding at 2½c for Manila tanks in New York.

Corn Oil

A firm tone was noted in the corn oil market after a rise early this period, as both the raw material and competing product were decidedly firm. Offerings of oil were quite light and the buying side of the market was inactive. Mill tanks are quoted at 5½c.

Cottonseed Oil

Cottonseed oil prices also advanced this period in step with the rest of the market. Southern markets for crude were firm, with offerings scarce.

Grease

Grease prices advanced this period, following the lead of tallow. Yellow and house grease are quoted currently at 3¾c to 3⅞c lb.

Palm Oil

This oil was one of the few items in the soap maker's list to be quoted lower this period, easing off fractionally to 3c lb. In view of the excise tax palm oil is now relatively unattractive as compared with domestic fats.

Tallow

Tallow continued to gain in price this period, reaching a level of 4⅛c lb. for city extra. The quarterly statement of the Census Bureau shows tallow stocks of 300,000,000 pounds as of June 30, 1934, a gain from the 279,000,000 pound total at the close of the preceding quarter. The increase was not taken as a bearish sign as far as prices go, however, as the increased slaughtering of cattle due to the drought merely means that there will be that much less tallow coming on the market later on. As a matter of fact one effect of the drought has been to cut down sharply the per head tallow yield on the cattle and sheep being slaughtered.

The index of employment in the soap industry for June, 1934, registered 99.9 as compared with an average for 1929 of 100, a decrease of 2.3 from the reading of the previous month, but representing an increase of 15.2 from the figure for June, 1933. The payroll index stood at 86.0 in June, 1934, a drop of 1.2 from May and an increase of 18.1 over the figure for June, 1933.

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A new Federal Specification for laundry bluing has just been issued by the Federal Specifications Board, Washington, from whom copies can be obtained. The Board has also issued an amendment to the specification for cake grit soap.

—— ♦ ——

THE OIL SOAP INDUSTRY

(*From Page* 26)

protection which are among the trump cards of the leading manufacturers.

In the important matters of buying of raw materials, and delivery of merchandise, the oil soap makers generally follow the lead of the hard soap people, so far as their smaller size and different nature make it wise for them to do so. Attempts to get around price fluctuations by buying materials far into the future have proved unfortunate for large and small users alike during the depression years. Certainly, however, the idea is not to be condemned on the basis of the abnormal times from which we are emerging. The man who has lost money in this way instead of saving it, has at least the consolation of knowing that he is still competitive because most of his fellows in the industry have suffered similarly to one extent or another.

Distribution systems vary widely. In the larger markets, warehousing is the usual method for direct sales, and jobber warehousing for that type of operation. Naturally, the warehouse map of the oil soap maker looks sparsely populated compared with that of some large companies, but it is in most cases entirely adequate, so that deliveries to the smallest markets can always be made within a thoroughly reasonably time. When it is realized that one drum of soap will often last a customer for six months or even more, it will be seen that same-day delivery is practically never necessary, if sales contacts are being made with sufficient frequency.

Thus, this series comes to a close. The writer feels moved to apologize for its inadequacy in certain respects. For the correctness of the material presented, however, he can vouch, although naturally there may be slightly different methods, materials or proportions used in some cases to produce the same results.

Market Report on

SOAP AND DISINFECTANT CHEMICALS

(*As of August* 8, 1934)

NEW YORK—The market for soap and disinfectant chemicals continued seasonally quiet this period, with the surprising feature being the failure of activity to slump off still further following the strenuous months immediately prior to passage of the excise tax. The soap industry continues to operate at approximately 100% of normal activity, although with stocks of finished soap reported to be piling up on jobbers' hands it seems probable that production may be cut down further, at least for a time. There were no important price changes in the market this period, the only changes being minor fluctuations in the naval stores group and fractionally lower prices on crude glycerin.

Alkalis

Soap manufacturers continue to draw liberally against their contracts for soda ash, caustic soda and caustic potash, as operations continue at a surprisingly high level. Seasonal reduction in activity and in other alkali consuming industries has slowed down the pace of the general market considerably. Prices continue to be firmly maintained at the same levels.

Glycerin

There is somewhat less disposition now for sellers of crude to hold out for higher prices. In fact, fractional concessions were made this period, the quotation on saponification dropping to 9¾c and that on soaps lye to 8¾c lb.

Rosin

There was a somewhat firmer tone to the naval stores market this period, with consumers showing increased interest at the lower levels reached recently. Additional strength was lent to the situation by the report that a fund is being set up to take care of loans against warehouse stock of the 1934 crop. Prices per barrel advanced 10 to 20c above the closing figures of last month.

RAWLS HEADS FOODSTUFFS DIVISION

Fletcher H. Rawls of Winston-Salem, N. C. has been appointed Chief of the Foodstuffs Division of the Department of Commerce, according to an announcement from Dr. C. T. Murchison, Director of the Bureau of Foreign and Domestic Commerce. Mr. Rawls succeeds E. G. Montgomery who was Chief for some years and who has become associated with the NRA. In the Foodstuffs Division activities are included all Commerce Department work in soaps, and oils and fats. Mr. Rawls, a native of Deer Park, Ala., comes to the Foodstuffs Division with a background of twenty-five years experience in the manufacture and distribution of food products. His experience has been in all parts of the world, including some years in Central America, Cuba, Russia, and other parts of Europe.

On July 27th, the constitutionality of the Maine Cosmetic Law, was argued before a statutory court consisting of Judges Peters, Letts & Wilson. In addition to the two test cases brought on behalf of the Associated Manufacturers of Toilet Articles, Liggett Drug Company, Inc. and Bourjois, Inc., the Association of Soap and Glycerine manufacturers also filed a bill in equity to restrain the enforcement of the law in the name of the Procter & Gamble Company. The chief interest of the soap industry was in attempting to have the law interpreted not to include soaps, although the unconstitutionality of the law was also pleaded in the complaint. At the conclusion of the hearing, the parties were given until October 1st to file briefs, and ten days additional to file reply briefs. It is therefore expected that no decision can be had in the matter until November 1st, and in the meantime the restraining order already granted by Judge Peters remains in force.

DETERGENTS IN LAUNDRY PRACTICE

(*From Page* 23)

Sodium orthosilicate is so effective that after the first bath, the pounding effect in the wheel is the only factor operating. Sodium metasilicate and the blended builder approach this condition, giving relatively little effect in the second, third, and fourth washes. Soda ash is next, with caustic soda and modified soda showing the greatest effects in the lather baths. The colloidal builders stand out as acting most quickly.

To evaluate all of the factors involved in laundry builders in terms of cost and best laundry procedure, is beyond the scope of this article. In general, the silicates are the more expensive, but they can be used with smaller amounts of soap and other chemicals than can the cheaper builders, and with less damage to the clothes. Theoretical considerations point to their extensive use in the future. A good detergent probably differs from others more in giving its detergency quickly, than in giving more total detergency over a long period of washing. The general use of builders has greatly increased the efficiency of the commercial laundry. The future trend will probably be toward such combinations as will shorten the washing cycle.

EDITOR'S NOTE:—*This is the second of a series of articles on Modern Laundry Practice in relation to detergents and washroom methods.*

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Rapeseed Oil (Undenatured)
Castor Oil
Sesame Oil
Lard Oil
Palm Oil
Corn Oil
Peanut Oil
Grease (Animal)

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Market Report on

ESSENTIAL OILS AND AROMATICS

(*As of August* 8, 1934)

NEW YORK—Several readjustments in price featured the market for essential oils and aromatics this period, chief among the new developments being an advance in anise oil and a drop in the price of cedar wood. Movements which were under way last period were further extended this month, notably further increases in bois de rose, peppermint oil and spearmint, and further reductions in oil citronella and lemongrass.

Oil Anise

Recent advances in the price of silver and foreign exchange caused an increase of 4c per pound in the local market quotation for anise oil this period.

Oil Bois de Rose

Higher replacement costs on Cayenne oil sent the local market up still higher this period, the current quotation being $2.65 to $2.90, while Brazilian is priced at $1.30 to $1.45.

Oil Citronella

Further lower shipment quotations from primary markets sent the price of this oil down a few cents further this period, the local market quotation now being 26 to 27c pound.

Oil Lavender

Foreign market quotations on lavender oil continue to be very firmly maintained. The local market also held firm this month, although no further advances were reported.

Oil Peppermint

The market picture on this oil had not changed this period. It seems very definite that the crop will be late and small, and normal consumption will mean a heavy drain on stocks, which are, however, ample to take care of all requirements. Prices continue to advance, with the present figure being $3.50 to $3.75 for natural oil.

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Henry A. Wiedman, connected for some time with Magnus, Mabee & Reynard, New York essential oil house, has left this position, it was learned recently. Prior to joining Magnus, Mabee & Reynard, Mr. Wiedman was manager of the chemical division of Schering Corp., new Sherka Chemical Corp.

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Net earnings of Monsanto Chemical Company for the second quarter of 1934 were $704,918, or approximately 81½c. a share on the 864,000 shares outstanding. Net earnings for the first six months of 1934 were $1,379,035 or approximately $1.59½c. a share.

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A public hearing on proposed amendments to the code for the furniture, and floor wax and polish industry, set for August 3, was canceled, as representatives of the industry were not prepared to proceed. Another date is to be set.

—— ♦ ——

Givaudan-Delawanna, Inc., New York, has issued a new price list of aromatic products as of July, 1934. Copies may be obtained by addressing the company at 80 Fifth Ave.

—— ♦ ——

F. W. Brown, connected with Magnus, Mabee & Reynard, Inc., New York for the past twenty-eight years as chemist in charge of development work on essential oils, has recently left the organization. He plans to take up work of the same type on his own account, operating from his home at 2665 Briggs Ave., Bronx, N. Y.

—— ♦ ——

Dr. Foster D. Snell, head of Foster D. Snell, Inc., New York, accompanied by Mrs. Snell, returned late in July aboard the S. S. Paris from a business trip which took them to England and the Continent.

—— ♦ ——

Paul E. Burchfield, who was awarded his Ph.D. in chemistry at Western Reserve University in June, 1934, has resumed his duties with the Harshaw Chemical Co. at their works in Philadelphia. Dr. Burchfield will spend his time on research and development of products for the textile and allied industries.

—— ♦ ——

SOAP PRODUCTION DOWN 6.3%

(*From Page* 27)

less important manufacturers. This schedule was used because of the necessity of reducing the cost of the census work, and in the hope of expediting such of the returns as had to be collected by mail. For most of the items the returns on the standard schedule covered by far the greater part of the production, and for these items figures are given in the table below. For some of the items, however, such as liquid, soft, and paste soaps, the production of manufacturers reporting on the short schedule constituted a considerable portion of the total; and since this schedule did not provide for any production detail whatever, it is impossible to give, for 1933, detailed figures for these items which are fairly comparable with those for 1931. The $11,946,238 given as the value of "Soap and related products and products not normally belonging to the industry, not reported separately" is the total of the values reported by manufacturers who used the short schedule. It probably includes a small amount representing the value of commodities other than soap and related products.)

BUILD BUSINESS UNDER YOUR LABEL

WE FURNISH THE LABELS WITH YOUR NAME IMPRINTED AT NO EXTRA COST

LIQUID SOAP BASE
Contains glycerine to give your finished product a smooth soothing effect to the skin.

LIQUID TOILET SOAP
Contains glycerine and gives a smooth soothing effect to the skin.

METAL POLISH
No harsh odor. Polishes easily and quickly. Pink color. Non-inflammable and non-settling.

PINE DISINFECTANT
Give a milk white emulsion in water. Has an unusual pleasant pine odor.

COAL TAR DISINFECTANT
Gives a milk white emulsion in water. Carbolic odor.

PINE FLOOR CLEANSER
A liquid floor cleanser having a fragrant pine odor. For cleaning glossy surfaces and linoleum, rubber, tile, etc.

Samples and prices upon request. Check items you are interested in and mail to

NEW YORK SOAP CORPORATION

294 PEARL ST., NEW YORK, N. Y.

OTHER QUALITY PRODUCTS

PINE DEODORANT CLEANSER — **COAL TAR DEODORANT CLEANSER** — **OIL SOAP**
LIQUID SHAMPOO — **SHAMPOO BASE** — **SILVER POLISH**

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for Soaps *and* Cleaners

Caustic Soda

"STAUFFER BRAND" Caustic Soda can be supplied either solid or liquid, in drums or tank cars. It is uniform, pure and worth while using in your soap products. Send your next Caustic Soda inquiry to us.

Carbon Tetrachloride

"STAUFFER BRAND" Carbon Tetrachloride will make a good cleaner better. It is 99.9% pure, the purest obtainable anywhere, is water white and is absolutely free from residue or residual odor. May we work with you when you are next in the market? Let us submit samples and prices. Anything from a drum up.

May we estimate on your requirements?

STAUFFER CHEMICAL COMPANY

Plants
Niagara Falls, N. Y.
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Office
420 Lexington Ave.
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CURRENT PRICE QUOTATIONS

As of August 8, 1934

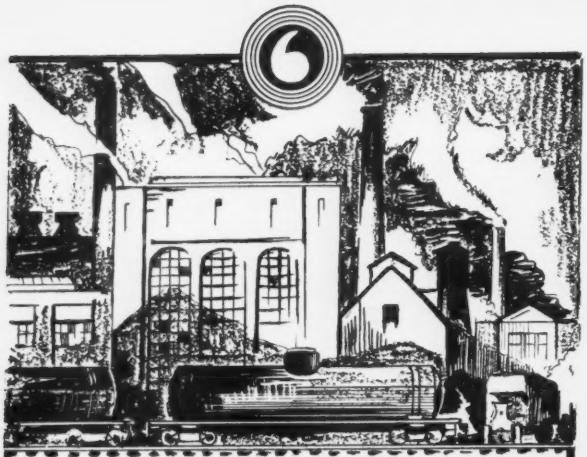
Minimum Prices are for car lots and large quantities. Price range represents variation in quotations from different suppliers and for varying quantities.

Chemicals

Acetone, C. P., drums lb.	.08½	.10
Acid, Boric, bbls., 99½% ton	95.00	100.00
Cresylic, 97½ dk., drums gal.	—	.55
97-99%, pale, drums gal.	—	.60
Oxalic, bbls lb.	.11	.11¼
Adeps Lanae, hydrous, bbls lb.	.14	.15
Anhydrous, bbls lb.	.15	.16
Alcohol, Ethyl, U. S. P., bbls gal.	2.45	2.69
Complete Denat., No. 5, drums., ex. gal.	.34	.42
Alum. Potash lump lb.	.03	.03¼
Ammonia Water, 260, drums, wks lb.	.02½	.02¾
Ammonium Carbonate, tech., bbls lb.	.08	.12½
Bleaching Powder, drums 100 lb.	1.75	2.35
Borax, pd., cryst., bbls., kegs ton	50.00	55.00
Carbon Tetrachloride, car lots lb.	—	.05¼
L. C. L. lb.	.06	.08½
Caustic, see Soda Caustic, Potash Caustic		
China Clay, filler ton	10.00	25.00
Cresol, U. S. P., drums lb.	.11	.11½
Creosote Oil gal.	.11½	.12½
Feldspar (200 to 325 mesh) ton	14.00	15.00
Formaldehyde, bbls lb.	.06	.07
Fullers Earth ton	15.00	24.00
Glycerine, C. P., drums lb.	.13½	.14
Dynamite, drums lb.	.13	.13½
Saponification, drums lb.	.09¾	.10
Soaps, Lye. drums lb.	.08¾	.09
Hexalin, drums lb.	—	.30
Kieselguhr, bags ton	—	35.00
Lanolin, see Adeps Lanae.		
Lime, live, bbls per bbl.	1.70	2.20
Mercury Bichloride, kegs lb.	.93	1.08
Naphthalene, ref. flakes, bbls lb.	.06	.07¼
Nitrobenzene (Myrbane) drums lb.	.09½	.11
Paradichlorbenzene, bbls., kegs lb.	.16	.25
Paraformaldehyde, kegs lb.	.38	.39
Petrolatum, bbls. (as to color) lb.	.01⅞	.06¾
Phenol, (Carbolic Acid), drums lb.	.14¼	.16
Pine Oil, bbls gal.	.59	.65
Potash, Caustic, drums lb.	.07⅛	.07½
Flake lb.	.08	.08¼
Potassium Bichromate, casks lb.	.08⅛	.08⅝
Pumice Stone, powd 100 lb.	2.50	4.00
Rosins (600 lb. bbls. gross for net)—		
Grade B to H, basis 280 lbs bbl.	5.32	5.50
Grade K to N bbl.	5.50	5.75
Grade WG and X bbl.	5.85	6.00
Wood bbl.	4.35	5.85
Rotten Stone, pwd. bbls lb.	.02½	.04½
Silica, Ref., floated ton	18.00	22.00
Soap, Mottled lb.	.04⅛	.04⅜
Olive Castile, bars lb.	.09	.12
powder lb.	.17	.22
Olive Oil Foot lb.	.04½	.06
Powdered White, U. S. P. lb.	.16	.20
Green, U. S. P. lb.	.06½	.08
Tallow Chips lb.	.06	.06½
Whale Oil, bbls lb.	.05	.06
Soda Ash, cont., wks., bags, bbls. 100 lb.	1.23	1.50
Car lots, in bulk 100 lb.	—	1.05
Soda Caustic, cont., wks., sld 100 lb.	—	2.60
Flake 100 lb.	—	3.00
Liquid, tanks 100 lb.	—	2.25
Soda Sal., bbls 100 lb.	1.10	1.35
Sodium Chloride (Salt) ton	11.40	14.00
Sodium Fluoride, bbls lb.	.07½	.09¼
Sodium Hydrosulphite, bbls lb.	—	.22
Sodium Silicate, 40 deg., drum 100 lb.	—	.80
Drums, 60 deg. wks 100 lb.	—	1.65
In tanks, 15c. less per hundred, wks.		
Tar Acid Oils, 15-25% gal.	.21	.25
Trisodium Phosphate, bags, bbls lb.	.03	.0355
Zinc Oxide, lead free lb.	.06	.06¼
Zinc Stearate, bbls lb.	.18	.19

Oils — Fats — Greases

Castor, No. 1, bbls lb.	.10¼	.11
No. 3, bbls lb.	.09¾	.10½
Coconut		
Manila, tanks, N. Y. lb.	—	.02½
Tanks, Pacific coast lb.	—	.02¼
Drums lb.	—	.03½
Cod, Newfound, bbls gal.	.40	Nom.
Copra, bulk, coast lb.	—	.01175
Corn, tanks, mills lb.	—	.05½
Bbls., N. Y. lb.	.06½	.06⅝
Cottonseed, crude, tanks, mill lb.	.05	.05¼
PSY lb.	—	Nom.
Degras, Amer., bbls. lb.	.03	.04
English bbls. lb.	.04¼	.05
German, bbls. lb.	.03¾	.04½
Neutral, bbls. lb.	.09	.12
Greases, choice white, bbls., N. Y. lb.	.04	.04¾
Yellow lb.	.03¾	.03⅞
House lb.	.03¾	.03⅞
Lard, prime, steam, tierces lb.	.07⅜	.07½
Compound tierces lb.	.08	.08½
Lard Oil,		
Extra, bbls. lb.	—	.07
Extra, No. 1, bbls lb.	—	.06¾
No. 2, bbls. lb.	—	.06
Linseed, raw, bbls., spot lb.	.0970	.1010
Tanks, raw lb.	—	.0910
Boiled, 5 bbls. lots lb.	—	.1090
Menhaden, Crude, tanks, Balt. gal.	.18	.20
Oleo Oil, No. 1, bbls., N. Y. lb.	—	.06¾
No. 2, bbls., N. Y. lb.	—	.06¼
Olive, denatured, bbls., N. Y. gal.	.84	.86
Foots, bbls., N. Y. lb.	.07⅛	.07⅜
Palm lb.	.03	.03⅛
Palm Kernel, casks, denatured lb.	.03¼	Nom.
Peanut, domestic tanks lb.	.05⅝	Nom.
Red Oil, distilled, bbls lb.	.06⅞	.07⅞
Saponified, bbls. lb.	.06⅞	.07⅞
Tanks lb.	—	.06
Soya Bean, domestic tanks, N. Y. lb.	—	.06½
Stearic Acid		
Double pressed lb.	.09	.10
Triple pressed, bgs. lb.	.11¾	.12¾
Stearine, oleo, bbls. lb.	.06½	.06¾
Tallow, special, f.o.b. plant lb.	—	.04
City, ex. loose, f.o.b. plant lb.	—	.04⅛
Tallow, oils, acidless, tanks, N. Y. lb.	—	.06
Bbls., c/l, N. Y. lb.	—	.06½
Whale, crude lb.	.03½	.04
refined lb.	.06¾	.07



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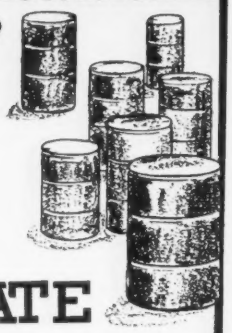

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FACTS

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Packagers of this popular household cleanser and water-softener will find this new Victor booklet of considerable value in preparing sales promotion material and advertising campaigns. Of interest, too, to the industrial user of Tri-Sodium Phosphate. Send for your copy today.

Victor Chemical Works
141 W. Jackson Blvd., Chicago
New York Nashville Kansas City

(*As of August 8, 1934*)

Essential Oils

Almond, Bitter, U. S. P.	lb.	$2.00	$2.50
Bitter, F. F. P. A.	lb.	2.25	2.75
Sweet, cans	lb.	.60	.65
Anise, cans, U. S. P.	lb.	.45	.48
Apricot, Kernel, cans	lb.	.26	.27
Bay tins		1.25	1.50
Bergamot, coppers	lb.	1.45	1.90
Artificial	lb.	1.00	1.20
Birch Tar, rect., tins	lb.	.70	.80
Crude, tins.	lb.	.13	.14
Bois de Rose, Brazilian	lb.	1.30	1.45
Cayenne	lb.	2.65	2.90
Cade, cans	lb.	.26	.30
Cajuput, native, tins	lb.	.50	.60
Calamus, tins	lb.	3.25	3.50
Camphor, Sassy, drums	lb.	—	.19
White, drums	lb.	—	.21
Cananga, native, tins	lb.	2.00	2.05
Rectified, tins	lb.	2.50	2.55
Caraway Seed	lb.	1.90	2.00
Cassia, Redistilled, U. S. P.	lb.	1.15	1.20
drums	lb.	—	1.10
Cedar Leaf, tins	lb.	.65	.70
Cedar Wood, light, drums	lb.	.25	.28
Citronella, Java, drums	lb.	.38	.43
Citronella, Ceylon, drums	lb.	.26	.27
Cloves, U. S. P., cans	lb.	.95	.96
Eucalyptus, Austl., U. S. P., cans	lb.	.27	.28
Fennel, U. S. P., tins	lb.	1.10	1.20
Geranium, African, cans	lb.	5.75	7.50
Bourbon, tins	lb.	5.50	6.40
Hemlock, tins	lb.	.70	.75
Lavender, U. S. P., tins	lb.	2.45	6.00
Spike. Spanish. cans	lb.	.95	1.00
Lemon, Ital., U. S. P.	lb.	1.00	1.40
Lemongrass, native, ians	lb.	.85	.100
Linaloe, Mex., cases	lb.	1.15	1.25
Nutmeg, U. S. P., tins	lb.	1.25	1.30
Orange, Sweet W. Ind., tins	lb.	1.45	1.75
Italian cop	lb.	1.50	2.25
Distilled	lb.	.60	.65
Origanum, cans, tech	lb.	.25	.50
Patchouli	lb.	2.75	3.00
Pennyroyal, dom	lb.	2.00	2.05
Imported	lb.	1.35	1.70
Peppermint, nat., cases	lb.	3.50	3.75
Redis., U. S. P., cases	lb.	3.80	4.20
Petit Grain, S. A. tins	lb.	1.10	1.15
Pine Needle, Siberian	lb.	.85	.90
Rose, Natural	oz.	5.50	18.00
Artificial	oz.	2.00	3.00
Rosemary, U. S. P., tins	lb.	.32	.38
Tech., lb. tins	lb.	.28	.30
Sandalwood, E. Ind., U. S. P.	lb.	5.75	6.00
Sassafras, U. S. P.	lb.	.75	1.00
Artificial	lb.	—	.40
Spearmint, U. S. P.	lb.	2.00	2.30
Thyme, red, U. S. P.	lb.	.50	.80
White, U. S. P.	lb.	.80	1.00
Vetivert, Bourbon	lb.	7.50	8.50
Java	lb.	16.00	20.00
Ylang Ylang, Bourbon	lb.	4.60	7.00

Aromatic Chemicals

Acetophenone, C. P.	lb.	$1.50	$2.25
Amyl Cinnamic Aldehyde	lb.	3.50	4.25
Anethol	lb.	1.00	1.10
Benzaldehyde, tech	lb.	.60	.65
U. S. P.	lb.	1.10	1.30
Benzyl, Acetate	lb.	.60	1.00
Alcohol	lb.	.75	1.15
Citral	lb.	1.90	2.20
Citronellal	lb.	2.25	2.50
Citronellol	lb.	2.55	3.00
Citronellyl Acetate	lb.	4.50	7.00
Coumarin	lb.	3.10	3.30
Cymene, drums	gal.	.90	1.25
Diphenyl oxide	lb.	1.05	1.25
Eucalyptol, U. S. P.	lb.	.62	.65
Eugenol, U. S. P.	lb.	2.00	2.50
Geraniol, Domestic	lb.	1.25	2.00
Imported	lb.	2.00	3.00
Geranyl Acetate	lb.	2.50	4.00
Heliotropin	lb.	1.85	2.10
Hydroxycitronellal	lb.	3.50	9.00
Indol, C. P.	oz.	2.00	2.50
Ionone	lb.	3.60	6.50
Iso-Eugenol	lb.	3.00	4.25
Linalool	lb.	1.65	2.25
Linalyl Acetate	lb.	3.00	4.25
Menthol	lb.	3.50	3.60
Methyl Acetophenone	lb.	2.50	3.00
Anthranilate	lb.	2.15	3.20
Paracresol	lb.	4.50	6.00
Salicylate, U. S. P.	lb.	.40	.45
Musk Ambrette	lb.	5.75	6.00
Ketone	lb.	6.25	6.50
Moskene	lb.	5.00	6.00
Xylene	lb.	2.00	2.50
Phenylacetaldehyde	lb.	4.00	6.50
Phenylacetic Acid, 1 lb., bot.	lb.	3.00	4.00
Phenylethyl Alcohol, 1 lb. bot.	lb.	4.25	4.50
Rhodinol	lb.	5.75	8.00
Safrol	lb.	.45	.48
Terpineol, C. P., 1,000 lb. drs.	lb.	.33	.35
Cans	lb.	.36	.37
Terpinyl Acetate, 25 lb. cans	lb.	.80	.90
Thymol, U. S. P.	lb.	1.40	1.50
Vanillin, U. S. P.	lb.	4.50	5.75
Yara Yara	lb.	1.30	2.00

Pyrethrum Products

Insect powder, bbls.	lb.	.34	.37
Concentrated Extract			
5 to 1	gal.	2.05	2.10
15 to 1	gal.	5.75	6.00
20 to 1	gal.	7.80	7.85
30 to 1	gal.	11.55	11.60

Gums

Arabic, Amb. Sts.	lb.	.09	.09½
White, powdered	lb.	.13	.13½
Karaya, powdered No. 1	lb.	.08	.09
Tragacanth, Aleppo, No. 1	lb.	1.15	1.20
Sorts	lb.	.11	.12

Waxes

Bees, white	lb.	—	.33½
African, bgs	lb.	.21	.22
Refined, yel.	lb.	.25	.26
Candelilla, bgs	lb.	.13	.14
Carnauba, No. 1	lb.	.32	.33
No. 2, yel.	lb.	.31	.32
No. 3, chalky	lb.	.19	.21
Ceresin yellow	lb.	.36	.38
Paraffin, ref. 125-130	lb.	.03⅜	.04¼

PERFUME BASES for SOAPS

Jasmin Chypre Sweet Pea Rose
Lilac Gardenia Bouquets Lemon

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In various grades to meet every requirement as to price

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GERMICIDAL DETERGENTS

(*From Page* 41)

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Attention is directed to increasing sales of perfuming materials as an indication of increasing prosperity in a recent bulletin mailed by C. C. Concannon, Chief of the Chemical Division of the U. S. Department of Commerce. Imports of perfuming materials into United States during the first five months of 1934 were 73% higher than for the corresponding period of 1933, according to the report.

—— ♦ ——

Bobrick Dispenser Co., New York, has just issued a new catalog, No. 634, listing and illustrating the complete line of Bobrick "Sop-O-Zon" dispensers. Copies may be obtained by addressing the firm at 215 Fourth Ave., mentioning the name of *Soap*.

Have you thought...?

of a copy of SOAP to be sent to your home each month ... for your personal use ... to be read at leisure ... and filed where the back copies will always be available? ... Is the copy in the office or plant always "missing" just when you want it?

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PRODUCTION SECTION

A section of SOAP devoted to the technology of oils, fats, and soaps published prior to Jan. 1, 1932, as a separate magazine under the title, *Oil & Fat Industries.*

Fat Substitution in Soap

Possibilities and Limits of Interchangeability of Fats According to Market Values and Availability

A METHOD for calculating the quantities and kinds of fats required to give a soap of definite properties, to be practical, must be both simple and scientifically sound. Such a method has been described by H. P. Martin in a recent issue of *The Industrial Chemist.* The mixtures given fall within limits which would be accepted by practical soap-makers. The method is of value chiefly for pan charges for soap of the type of yellow bar laundry soap. The general formula is for a soap very popular in England. It is no doubt of interest to American soap-makers because of the relatively low requirement of coconut oil. It may even be possible for an ingenious soap-maker to apply it to toilet soap.

Fats of the tallow class improve the detergent value of soap, make it firm, but reduce solubility. The nut oil class, such as coconut oil, gives solubility resulting in quick lathering and, at the same time, hardness. Soft oils, such as cottonseed oil and peanut oil, soften the soap and add solubility. Rosin gives softness and solubility and also acts as a preservative. Thus soap-makers are faced with a nice problem if they wish to vary the quantities of fats taken because of market prices, and yet obtain a well-balanced soap as regards these properties.

In the majority of soap factories, the formula for the charge used for a laundry soap is usually a matter of tradition. Substitution of fats, in order to take advantage of fluctuating market conditions, is carried out more or less empirically. The general practice has been to have what was looked upon as a standard formula, consisting of definite proportions of tallow, grease, coconut oil, and rosin. But it was not always possible to adhere strictly to this formula and substitution of other fats was permitted within fixed limits. For instance, it might be stipulated that the tallow class should be present to the extent of 20 to 40 per cent of the charge, soft oils from 15 to 30 per cent, nut oils from 20 to 45 per cent, and rosin from 7½ to 12½ per cent. Working along these lines, if the amount of nut oil were reduced, the proportion of soft oil would be increased to maintain the solubility, but at the same time an increased amount of tallow would have to be used to maintain the hardness. This is equivalent to replacing part of the nut oil by a mixture of tallow and soft oil, but as no mixture of these can have the properties of nut oil, as may be seen from Table I, this method of preparing charges is only a compromise, and is therefore bound to fail at times. The limits for the various fats were originally determined by experience. The whole question is one on which there is still a great diversity of opinion among practical soap-makers.

Such fats as mowrah and mofura may be used with trepidation in one factory to the extent of only 10 per cent of the fat charge, while at others they may be used with confidence up to 25 per cent of the charge. Frequently these views are the result of unfortunate experiences. One of the causes of non-success is the fact that the fats in question are not entire substitutes for tallow. Grease, mofura and mowrah oils all give soaps which are softer than tallow soaps. If a soap is already on the soft side, such a substitution will cause a further unbalance. As a result, there is naturally some reluctance about trying new charges, and

Table I

Fatty Acid	Coconut oil	Palm kernel oil	Coconut par. oil	Tallow (S. A.)	Palm oil	Illipe tallow	Vegetable tallow	Cotton oil	Peanut oil	Soy bean oil	Sesame oil	Sunflower oil	Corn oil
Caprylic	8.70	3.0	2.0	...	...	...	...	...	...	...	...	...	...
Capric.....	5.85	6.0	2.0	...	...	...	1.65	...	...	...	...	...	...
Lauric	49.5	50.0	28.0	...	...	...	...	...	...	...	...	...	...
Myristic	18.0	16.0	22.0	2.5	1.0	1.5	4.7	...	...	...	...	...	...
Palmitic	8.25	6.5	12.0	25.0	35.5	21.5	63.6	23.4	7.3	6.9	7.7	3.6	7.8
Stearic	2.55	1.0	1.0	20.0	8.5	39.0	2.45	...	2.6	4.5	4.6	3.0	3.6
Arachidic ...	...	...	...	...	...	...	...	...	5.2	0.8	2.8	0.6	0.4
Oleic	5.35	16.5	23.0	47.5	48.0	38.0	27.6	23.0	65.7	33.6	48.1	34.1	46.4
Linoleic	1.80	1.0	10.0	5.0	7.0	...	...	53.6	19.2	51.9	36.8	58.7	41.8
Linolenic	...	...	...	...	...	...	...	...	...	2.3	...	...	...

thus the fullest advantage of variations in market price cannot be taken.

The difficulty of arriving at a charge of exact chemical composition, if the quantities of fats used are varied, is perhaps best illustrated by Table I, which shows the percentage compositions of the fatty acids present in many of the soap-making fats and oils.

A consideration of the fat and oil compositions will show that some fats can be looked on as intermediate between two groups. For instance, palm oil resembles tallow to which some soft oil has been added, while coconut parings oil might be regarded as a mixture of coconut oil and soft oil. On the other hand, such fats as Chinese vegetable tallow and illipe tallow contain too much palmitic and stearic acids and too little oleic acid to enable them to replace tallow, but if some soft oil could be added to make good the deficiency of oleic acid, a mixture could be obtained with approximately the same composition as tallow.

The procedure recommended is to calculate the equivalents of each fat in terms of the three main groups —tallow kinds, nut oil kinds, and soft oil kinds—and to use these equivalents for calculating the amounts of the various oils to be taken. In Table II is an example of a substitution for tallow. The most suitable soft oil for this purpose is peanut oil, because of its high oleic acid and low linoleic acid contents.

Table II

Fatty Acids	2 parts of Illipe Tallow Containing %	1 part of Peanut Oil Containing %	3 parts of Mixed Fat Containing %		Tallow Composition %	
Myristic ...	1.5	...	1.0		2.5	
Palmitic ...	21.5	7.3	16.8		25.0	
Stearic	39.0	2.6	26.9	45.4	20.0	45.0
Arachidic ..	...	5.2	1.7		...	
Oleic	3.80	65.7	47.2		47.5	
Linoleic ...	...	19.2	6.4		5.0	

The differences between the figures in the last two columns of Table II are less than are found between samples of standard beef tallow from different sources. The equivalents of other soap-making fats calculated in the same way are given in Table III.

It will be noted that certain soft oils such as soy bean, corn and sunflower oils, are not included in Table III. These oils, because of the large amounts of unsaturated fatty acids which they contain, have a tendency to soften the soap, if used indiscriminately. Being readily oxidized, they also produce soaps which deteriorate in color and odor rather quickly. They are therefore only partial substitutes for the soft oil portion of a soap charge, and their use is limited. The following substitutions can be made: (a) Bleached soy bean and sunflower oils can be used safely in place of 80 per cent of other soft oils in the soap charge; (b) sesame, maize and niger seed oils in place of 60 per cent; and (c) unbleached sunflower oil in place of 20 per cent of other soft oils.

Table III

Oil or Fat	No. of Parts	Equivalent to Parts—Tallow	Equivalent to Parts—Nut Oil	Equivalent to Parts—Soft Oil
Tallow, standard (42.5-44°C. Titer)..	1	1	...	...
Palm oil	10	9	...	1
Mowrah oil	6	5	...	1
Lard	4	3	...	1
Grease (39°C. Titer)..	6⅔	5⅔	...	1
Mofura oil	10	9	...	1
Shea butter	3	2	...	1
Coconut oil	1	...	1	...
Palm kernel oil.....	1	...	1	...
Coconut oil oleine....	10	...	9	1
Coconut parings oil...	3	...	2	1
Cottonseed oil	1	...	...	1
Kapok oil	1	...	...	1
Peanut oil	1	...	...	1
Tallow (46°C. Titer)	6½ parts plus 1 part of peanut oil equal 7½ parts of standard tallow.			
Chinese Vegetable Tallow Illipe Tallow	2 parts of these plus 1 part of peanut oil equal 3 parts of standard tallow.			

When oils in both groups b and c are used, the total amount of these present should not exceed the limit for group b. For example, if a formula calls for 25 per cent of soft oil, the charge may contain 10 per cent of peanut oil, 10 per cent of maize oil, and 5 per cent of unbleached sunflower oil. Another way of putting it is to say the charge for a formula containing 25 per cent of soft oil may contain up to 20 per cent of group a, 15 per cent of group b, and 5 per cent of group c, but not over 15 per cent of groups b and c combined. These semi-drying oils, and also whale oil, can be converted into complete substitutes for soft oils if they are polymerized by heating in an inert atmosphere for a suitable period of time.

Practical Application

A GOOD formula for household laundry soap as made in Great Britain is 35 per cent tallow, 25 per cent soft oil, 30 per cent nut oil, and 10 per cent rosin. Assume that the fats available are: Tallow class, —tallow, palm oil and lard; nut oil class,—palm kernel

oil and coconut oil oleine; soft oil class,—peanut oil and soy bean oil. The first thing to do is to fix the amounts to be taken of what might be described as the partial substitutes, in this case, lard, palm oil and coconut oil oleine. The limiting factors are now reduced to considerations of quality and color, and assuming the materials to be satisfactory in these respects, any convenient quantities can be taken.

We will suppose that the stocks enable 12 per cent of lard, 10 per cent of palm oil and 10 per cent of coconut oil oleine to be used. From Table III we see that lard is equal to 9 per cent of tallow and 3 per cent of soft oil, and palm oil equal to 9 per cent of tallow and 1 per cent of soft oil, thus supplying together 18 per cent of the tallow and 4 per cent of the soft oil. The balance of the tallow portion of the charge is then made up with 17 per cent of straight tallow.

Coconut oil oleine supplies 9 per cent of the nut oil and 1 per cent of the soft oil, leaving the balance of the nut oil portion to be added as 21 per cent of palm kernel oil, and the balance of the soft oil to be divided between peanut oil and soy bean oil. The simplest method is to arrange the charge in tabular form, and to complete each class of fat or oil in turn, as shown in Table IV.

Table IV

Material	Percentage in Fat Charge	Tallow	Equivalent to— Soft oil	Nut oil	Rosin
	%	%	%	%	%
Lard	12	9	3	..	..
Palm oil	10	9	1	..	..
Tallow	17	17	..	..	..
Coconut oil oleine.	10	..	1	9	..
Palm kernel oil...	21	..	..	21	..
Peanut oil	10	..	10	..	..
Soy bean oil.....	10	..	10	..	..
Rosin	10	..	..	..	10
Total	100	35	25	30	10

The following standard charges are considered suitable for yellow soap by conservative British soapmakers:

A	%	B	%
Tallow	35	Tallow	35
Coconut oil	30	Palm kernel oil.....	30
Cottonseed oil	25	Peanut oil	25
Rosin	10	Rosin	10

Soaps made from charges A and B are very similar in appearance and properties, though for very different reasons. A comparison of the actual composition of charges A and B, with that given in Table IV, in terms of fatty acids, shows that the charge in Table IV is intermediate in composition between charges A and B. Therefore the example given must produce a satisfactory soap, similar to those given by the standard charges as regards hardness, solubility, lathering, detergent and keeping qualities.

Many other cases involving widely different formulas, and the use of other fats, have been tested in the manner described. No exceptions have been encountered. Since uniform and satisfactory results have been obtained in practice, the method can be recommended for general use.

An interesting case of an application might be cited. A tallow rosin was being made, and it happened that at the time large supplies of Chinese vegetable tallow were available at a favorable price. By applying the procedure described, as much as 50 per cent of the vegetable tallow was introduced. The finished soap remained firm and satisfactory in every way. From a soap-maker's point of view, perhaps the most interesting feature in this instance is the fact that the soap in question was a filled soap, and the base was reduced from a 63 per cent fatty acid content to 40 per cent by the addition of the usual ingredients, without any difficulties arising.

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DRYING TOILET SOAP

The drying process in soap manufacture is one of the most fruitful sources of grittiness, and may also give rise to cracking. The modern procedure of drying by chilling the soap on rollers, and then passing it through a heated chamber on bands, appears to have a smaller margin of safety than the older method of cooling it in frames and then chipping and drying. In the first method, the soap forms very small crystals and, unless special precautions are taken, the chips have a tough, overdried skin, while their centers are still quite damp. It has been found that soap dries more satisfactorily in a moist atmosphere. It is therefore an advantage to circulate a portion of the moist air from the exhaust fan back through the drying chamber and to reduce the inlet air proportionally.

Chips should be of uniform thickness to prevent overdrying in parts. Often soap is passed through rollers at the end of each band in the drying chamber, thus presenting a fresh surface for drying. It is also helpful if the soap, as it comes from the drier, is allowed to slide down an inclined grid of wire netting of about 3/8ths inch mesh. This removes overdried particles which would eventually give rise to grittiness. In any case, it is advisable to give the chips a preliminary milling through a two- or three-roller mill immediately as they come from the drier. H. P. Martin. *Soap, Perfumery and Cosmestics Trade Rev.* **7,** No. 5, 8-9 (1934).

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Manufacturers who use commercial stearic acid or stearin in operations where it is boiled with open steam, may notice some discoloration from the presence of iron sulfide. In such cases, the use of 1/4 to 1/2 per cent hydrochloric acid will keep the product white. *Soap Trade Review.* **7,** No. 4, 13 (1934).

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Castor oil can be made soluble in mineral oil by heating it in an autoclave under pressure in the presence of air, carbon dioxide, nitrogen or other suitable gas. Karl Klein. German Patent No. 593,634, dated March 1, 1934.

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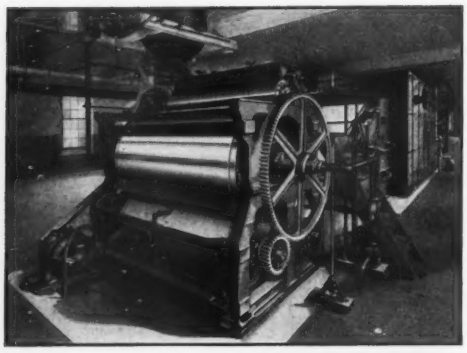

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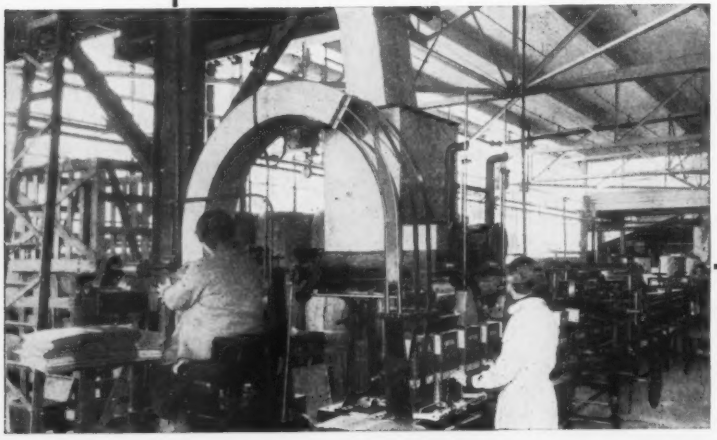

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		Per Cent
I.	Stearic acid	20.00
	Cocoa butter	2.00
	Sulfonated castor oil	10.00
	Glycerine	5.00
	Triethanolamine	1.00
	Borax	1.25
	Water	60.25
	Perfume	0.50
II.	Stearic acid	16.0
	Mineral oil	3.0
	Caustic potash	1.0
	Glycerine	5.0
	Water	74.5
	Perfume	0.5
III.	Stearic acid	20.0
	Hardened cotton oil	4.5
	Ethylene glycol	1.5
	Triethanolamine	1.5
	Alcohol	1.0
	Water	71.0
	Perfume	0.5
IV.	Stearic acid	10.00
	Sulfonated olive oil	15.00
	Sodium lauryl sulfate	1.00
	Lecithin	2.00
	Triethanolamine	1.25
	Water	65.25
	Glycerine	5.00
	Perfume	0.50

Seifensieder Ztg. **61,** 442-4 (1934).

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The soap manufacturer can profitably modify his perfumes by combining essential oils with artificial or synthetic perfume materials. For example, 50 grams of pure rose oil can be replaced by 80 grams of artificial rose oil. A portion of geranium oil and linaloe oil can be replaced advantageously with geranyl acetate. A simple, yet satisfactory composite perfume contains: 400 grams methylacetophenone, 100 grams transdecahydro-betanaphthylacetate, 50 grams labdanum resinoid. to this is added 200 grams citronella oil, rosemary oil, or linaloe. J. Augustin. *Deut. Parfumie-Ztg.* **20,** 118-19 (1934).

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Emulsifying agents are made from synthetic glucosides of high molecular weight. To obtain these, glucose, maltose or lactose is condensed with aliphatic alcohols containing more than 8 carbon atoms, or with alkylphenols or hydrogenated phenols. H. Th. Boehme A.-G. German Patent No. 593,422.

ALCOHOL SULFATES AS METAL CLEANERS

In removing grease or oil from metallic surfaces, the cleansing agent acts (1) by means of its wetting power, to form a layer between the surface of the metal and the grease (2) to emulsify the grease, and (3) to rinse off easily, leaving the surface of the metal clean and free from streaks. While soap has been considered satisfactory for this purpose, the fatty alcohol sulfates appear to be even better. Their wetting power is greater than that of soap, and they are soluble at the low temperature at which most metal cleaning occurs. The fatty alcohol sulfates are especially effective when used with excess alkali. The ease of rinsing off these detergents is particularly useful here, as streaks or residues of any kind must be avoided in such metallic processes as electroplating and enameling. M. B. Peterson. *Metal Cleaning and Finishing.* **6,** 127 (1934).

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Resin soaps having a high content of free resin are made by treating the resin in the presence of a protective colloid and at a total concentration of 35-55 per cent of resin, with an amount of alkali carbonate corresponding to saturation of resinic acids between 25 and 55 per cent. This is done without agitation, near the boiling point but without boiling. Antoine C. Gillet. French Patent No. 757,571, dated December 28, 1933.

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In bleaching oils, fats and waxes, the material is treated with the usual bleaching agents in one or more stages as an aqueous emulsion. It is treated with bleaching agents in one or more other stages in the liquid or fused state. The same or different bleaching agents may be used in different stages. Oxidizing bleaching agents are preferred. Treatment with bleaching earth or similar adsorbent may precede or follow any of the stages. The bleached material may be after-treated with a small proportion of a reducing agent. Deutsche Gold-und Silber-Scheideanstalt vorm. Roessler. German Patent No. 595,126.

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The importance of trisodium phosphate in the treatment of boiler water has increased with the development of the high-pressure boiler, where the higher temperatures involved have introduced new problems in the prevention of scale formation. Trisodium phosphate is used to soften the feed water to the boiler and to maintain the solids in the boiler water in the form of a sludge. It has been suggested as a means of softening domestic water supplies. Compressed blocks in which a binder is incorporated are manufactured for use in supply tanks. C. W. Tod. *Ind. Chemist* **10,** 208-11 (1934).

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Brazilian babassu palm kernel oil closely resembles the "urycury" and coconut oils of Brazil. R. Lude. *Fettchem. Umschau.* **41,** 51-3 (1934).

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ON PRODUCTS AND PROCESSES

The incorporation of rosin in hard laundry soaps imparts to them the characteristic rosin odor, yellow color, and tough, waxy texture which tends to overcome and prevent cracking and breaking when processed in the cake or bar form. It tends to slow up or prevent crystallization of the soaps of the harder fatty acids, and to render them softer and more readily soluble. For this reason, rosin cannot be used in the production of chipped, shredded or powdered soaps. Archibald Campbell. *Ind. Eng. Chem.* **26,** 718-9 (1934).

Iron sulfate solution is a satisfactory coagulant in glycerin refining. The use of 2 per cent iron sulfate reduces the amount of activated charcoal required from 4.5 to 2 per cent. The purified glycerin contains about 0.5 per cent of moisture and 0.7 per cent of non-volatile organic matter. The color is pale yellow. Vigovskii and Yurkov. *Oil and Colour Trades J.* **85,** 948 (1934).

Oils and fats are first bleached with per-compounds and then treated with adsorbents. The first treatment is controlled so as not to impair subsequent adsorption. This is accomplished by keeping the temperature below 75° C. and the reaction mixture acid. Soc. des produits peroxydes. French Patent No. 726,166.

Solid shaving soap consists of an alkali soap mixed with a lesser amount of ammonium soap. The amount of alkali soap must not be more than 4 times that of the ammonium soap. Viktor Scheffer. Austrian Patent No. 137,212.

The following combination of fats is claimed to give a soap having maximum detergent action.

Fat	*Percentage*
Tallow	46.5
Coconut oil	15.5
Rosin	4.0
Linseed oil	3.0
Peanut oil	31.0

The authors believe that the proportions represented of low molecular weight fatty acids, normal fatty acids, high molecular weight fatty acids and unsaturated fatty acids give maximum wetting and emulsifying power. R. L. Datta and S. S. D. Gupta. *Soap, Perfumery and Cosmetics Trade Rev.* **7,** No. 6, 10-11 (1934).

An odorless dry-cleaning solvent composition consists of trichlorethylene containing about 1 per cent of a soap composition consisting of a fatty acid soap and a polyglycol. Canadian Industries, Ltd. Canadian Patent No. 342,427.

Stable soaps which give solutions liberating nascent chlorine in the cold are made by adding sodium p-toluenesulfochloroamide to a paste of soap made in the cold. Soc. d'exploitation de produits d'entretien. French Patent No. 760,780.

A study of the physical properties of common detergents shows sodium metasilicate and alkali to be superior in wetting and dissolving power, trisodium phosphate and sodium metasilicate superior in emulsifying power, and sodium metasilicate superior in deflocculating power. Arnold H. Johnson. *Ann. Rept. N. Y. State Assoc. of Dairy and Milk Inspectors* **6,** 37-46.

Abrasive soaps are coming into more general use in England. Finely powdered pumice stone is commonly used as the abrasive. Recently a non-siliceous abrasive powder has been introduced in order to avoid silicosis among the workers during manufacture. Powder passing a mesh of about 200 per square inch is probably the most suitable. *Perfumery and Essential Oil Rec.* **25,** 197 (1934).

Mono- and diglycerides are manufactured by the reaction of triglycerides with glycerol in the presence of a catalyst of the class consisting of soaps and alcoholates. Water formed by side reactions is distilled from the reacting mixture. August Edeler and Albert S. Richardson, to the Procter and Gamble Company, Canadian Patent No. 340,805.

Washing and foaming agents are obtained by the action of phosphoric acids or their anhydrides on mono- or disaccharides and alcohols. For example, dextrose is warmed with a mixture of phosphoric acid, phosphorus pentoxide and lauryl alcohol. The product is separated from aqueous solution by the addition of butyl alcohol. H. Th. Boehme A.-G. British Patent No. 404,684.

Superfatted products such as soaps, creams, pommades and polishes are improved by adding to the usual constituents such compounds as dodecyl sulfide, tetradecyl amine, and dodecyl sulfone. Henkel & Cie. French Patent No. 761,568.

Rancid oils and fats are restored by treatment with aldehydic of ketonic reagents, such as hydroxylamine, semicarbazide, etc., followed by filtering. Schering-Kahlbaum A.-G. German Patent No. 592,972.

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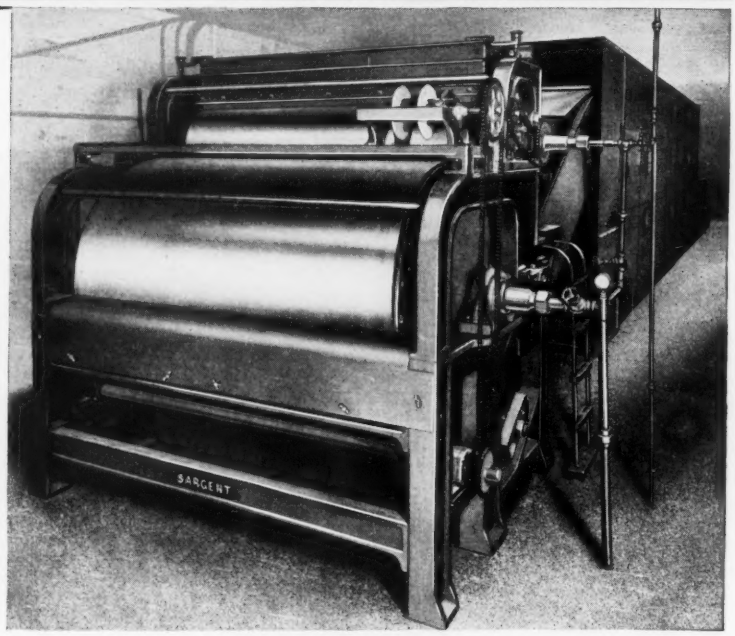

AS the title indicates, the Rolls are NEW and the entire machine is NEW, many valuable improvements having been perfected until this latest Sargent development is now one of the very finest Rolls obtainable.

To the soap manufacturer, the most important angle is to have a *thin, uniform chip* . . . readily accomplished by these new Rolls being expertly machined, ground and set. Finest grade of cast iron. Vari-speed controls on both Rolls insures easy adjustment . . . every part accessible. Drive improvements reduce the horsepower used. Changes made at a minute's notice. The Dryer is entirely re-designed. Its housing gives better insulation and cuts down steam consumption per hour. Other valuable changes have been made in the circulating and exhaust air systems . . . and all *fans* are *direct motor driven.*

C. G. SARGENT'S SONS CORP. GRANITEVILLE MASS., U. S. A.

New Soap Process!

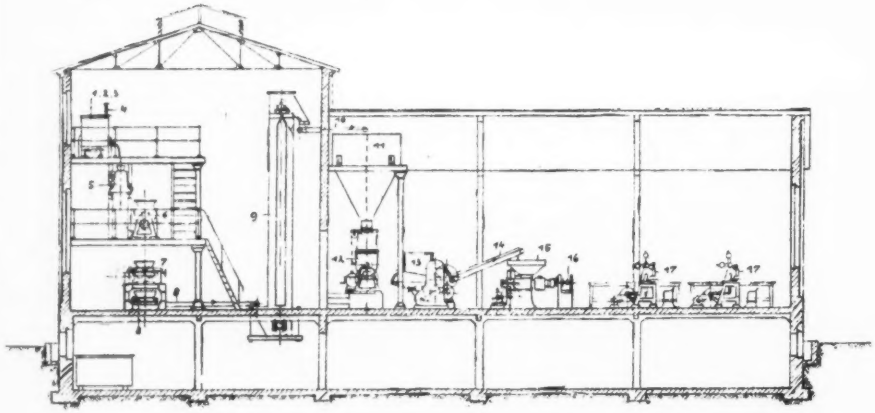

Diagram of Schaal Process

1. Tallow tank
2. Coconut tank
3. Alkali tank
4. Thermometer
5. Mixer
6. Amalgamator
7. Chilling rolls
8. Gear drive
9. Elevator
10. Gear drive
11. Feed tank
12. Crutcher
13. Mill
14. Gear drive
15. Plodder
16. Cutting table
17. Soap press

FINISHED soap in thirty minutes by the new Schaal Process. Complete saponification giving a soap which will not turn rancid, remaining stable and odorless indefinitely. Capacity with 250 gal. crutcher 10,000 to 12,000 lbs. per day. No kettles, pumps, dryers, or steam required. Makes soap base for any purpose. For large or small plants. No kettle residues. Glycerine saving in small plants. Process based on temperature control and special saponification catalyst. Use of process offered. Further details from

JULIUS SCHAAL
P. O. BOX 88 HUDSON TERM. STA.
NEW YORK

SOAP CONTENT OF LIQUID SOAP

The following is a simple method for the determination of anhydrous soap in liquid soap. It is sufficiently accurate for ordinary routine work. Pour 20 cc. of the soap solution into a 25 cc. glass-stoppered graduated cylinder. Add 5 cc. of concentrated sulfuric acid. Stopper and shake, taking great care to prevent the contents from forcing out the stopper, due to the heat generated. Shake thoroughly, remove the stopper, and let cool. The volume of oil separating on the surface corresponds to a definite percentage of anhydrous soap in the original sample, according to the following table:

Reading cc.	*Per Cent Anhydrous Soap*
1.0	6.0
1.3	7.5
1.5	8.75
1.7	10.0
2.0	11.75
2.1	12.5
2.5	14.75
2.6	15.0
3.0	17.5
3.2	18.6
3.4	20.00
3.5	20.25
3.9	22.5
4.0	23.25
4.4	25.0
4.5	25.75
4.8	27.5
5.0	28.75
5.2	30.0
5.5	31.5
5.7	32.5
6.0	34.5
6.1	35.0
6.5	37.25
6.6	37.5
7.0	40.0

Norris W. Matthews. *The Chemist Analyst* **23,** No. 3, 5-6 (1934).

Refined fatty acids of low iodine number are mixed with an excess of substantially dry soda in the presence or absence of a fat solvent. Before the reaction product has solidified a per-salt is added to the mixture. The product is then powdered or worked up in the usual manner into flakes, filaments, etc. Adolf Welter. German Patent No. 589,080.

—— ♦ ——

A castor oil of improved viscosity more or less miscible with mineral oils, is made by heating castor oil to 200-250° C. for 8 to 12 hours under a vacuum of 5 to 20 mm. of mercury, in the presence of a catalyst such as tin oxide. Louis E. Gontard. French Patent No. 760,783.

TIN CHLORIDE AS SOAP ANTIOXIDANT

Experiments in which soap was aged under unfavorable conditions show that formaldehyde, paraformaldehyde, stannous chloride, stannous oxide, sodium stannate, and magnesium silicate all have a marked inhibiting action on the oxidation of soap. The most striking results were given by stannous chloride and magnesium silicate. The latter is not readily available in a form suitable for use in soap. (The tin salt has for some years been used in soap bleaching owing to its powerful reducing action.)

The optimum amount of stannous chloride to be used as a preservative for soap is about 0.2 per cent. The solution is prepared by adding 25 parts of hot water gradually with constant stirring, to 35 parts of stannous chloride crystals ($SnCl_2.2H_2O$). Strain through a fine cloth. The solution should be prepared every day or every other day to avoid a deposit of hydrated tin oxide. For toilet soaps, 6 ounces of the solution is used with 112 pounds of dried soap chips. It is added at the same time as the perfume and similar ingredients, immediately before milling. This treatment reduces the rate of oxidation of soap by about one-half. H. P. Martin. *Soap, Perfumery and Cosmetics Trade Rev.* **7,** No. 6, 8-9 (1934).

—— ♦ ——

Soapless shampoo base consists mainly of sulfonated castor oil, to which sulfonated olive oil is usually added to reduce stickiness. White mineral oil may also be added. The mixture should be neutralized to a pH value of 7 to 7.5 when tested in dilute solution. If slightly acid, the shampoo is more viscous, but it also leaves a sticky feel and is not as readily rinsed out. Eric Meyer. *Drug and Cosmetic Ind.* **34,** 353-5 (1934).

—— ♦ ——

To prevent the formation of clots, and to aid the solution of detergents made in powder or granular form, a product is incorporated in the powder, capable of producing a gaseous discharge. Such an addition consists of carbonates or bicarbonates and tartaric acid, sodium bisulfate, etc. R. R. Fabregas and J. M. Ostheim. Canadian Patent No. 342,325.

—— ♦ ——

Essential oils react with antimony trichloride to give various shades of yellow, brown and red. Wormwood oil gives a green color and cedar wood oil an intense blue. Terpenes also give qualitative color reactions with the same reagent. These have been tabulated. *Perfumery and Essential Oil Rec.* **25,** 187 (1934).

—— ♦ ——

Mucilages, phosphatides and other impurities are removed from vegetable and animal fats or oils by treatment with salt, or salt and acid solution. Fatty acids and acids present from the first treatment are neutralized with alkali and then precipitated impurities are separated by sedimentation. Metallgesellschaft A.-G. French Patent No. 761,965.

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ACTION with plenty of stamina . . . speed with safety . . . all these keep your cleansers in championship form. You get such distinction easily and economically with a Metso Detergent.

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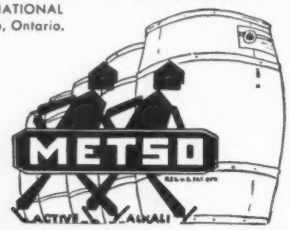

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To determine the oxidizing power of available oxygen of the peroxide and the ozonide of an oil or fat, shake 1 cc. or 1 gram of sample with 20 cc. of a 10 per cent potassium iodide solution. Add 3 cc. of 20 per cent sulfuric acid and titrate free iodine with 0.01 or 0.1 *N* sodium thiosulfate solution, using starch as indicator. Heat the solution on a boiling water bath until no more iodine is liberated. Taichi Harada. *Bull. Chem. Soc. Japan* **9**, 197-8 (1934).

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A tallow substitute is obtained from vegetable oils by hydrogenation of various combinations of peanut, coconut, castor, cottonseed, and linseed oils. A mixture containing 80 per cent of peanut oil, 15 per cent of coconut oil, and 5 per cent of castor oil is hydrogenated with a nickel catalyst to give a product closely resembling animal tallow. The cost is about 10 per cent greater than that of the natural article imported into India. M. S. Patel and B. S. Kanvinde. *Dept. Ind. Bombay Presidency Bull.* No. 8 (1934).

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The new Haskins type BCF capping machine in operation at the O'Cedar plant in Chicago, showing the machine capping O'Cedar's cream polish. It is also used for capping their other products packed in containers having screw caps. This machine can be used for

driving plastic and metal caps up to 54 mm. Over 90 caps per minute can be obtained through the use of this machine, the maker states. Many other advantages are claimed chief of which are that it drives caps with uniform tension eliminating leakage, reduces cap breakage and marring of finishes on caps and does equally efficient work on almost any size or shape cap. The equipment can be furnished to be mounted vertical on table, conveyor or suspended from the ceiling. The manufacturer is the R. G. Haskins Co., 4642 W. Fulton St., Chicago.

New Patents

Conducted by

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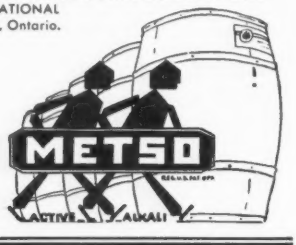

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AT THE meeting of the National Association of Insecticide and Disinfectant Manufacturers in June of this year, the Insecticide Committee stated:

"This ushers us up to the fifth chapter (of the report) namely, the worst case of insecticide constipation which we have ever seen. The dry weather and the curtailed purchasing power of last year contributed to the dearth of insecticide sales, but the fact remains that this year's hold-over stock in the hands of thousands of retailers, also voluntary chains and wholesalers, is much heavier than is good for the industry."

We feel a certain pride in the fact that during this period from January 1st to June 1st 1934, the sale of Pyrocide 20 increased 30 per cent over the same period in 1933. While this may not be conclusive proof that all household insecticides made from Pyrocide 20 experienced an unusual

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sale during that period, still, we do feel that there must have been a general acceptance of these insecticides by the public.

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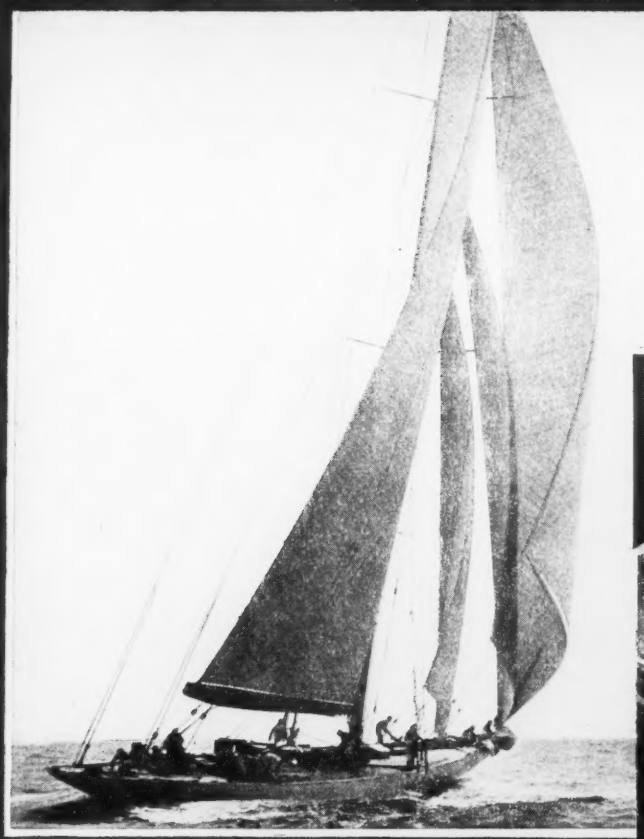

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Violet No. 611	3.10
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An efficient liquid household insecticide of the pyrethrum type, pleasantly scented. Surpasses in effectiveness the standard of the National Association of Insecticide and Disinfectant Manufacturers. Each lot carefully controlled by the Peet-Grady method. Supplied in bulk for distributors to resell under their own trade-names. Also suppliers of pyrethrum concentrate.

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made from pure steam-distilled pine oil, and agreeable in odor and dilute with water to form rich, milk-white emulsions.

HIPINE, made according to the formula of the Hygienic Laboratory has a minimum phenol coefficient of four.

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CLEARPINE is a specially refined product, very light in color, and has a minimum phenol coefficient of four.

All are high-grade products, reasonably priced. Every lot chemically controlled and standardized. Supplied only in bulk to the distributing trade for resale under their own names and labels.

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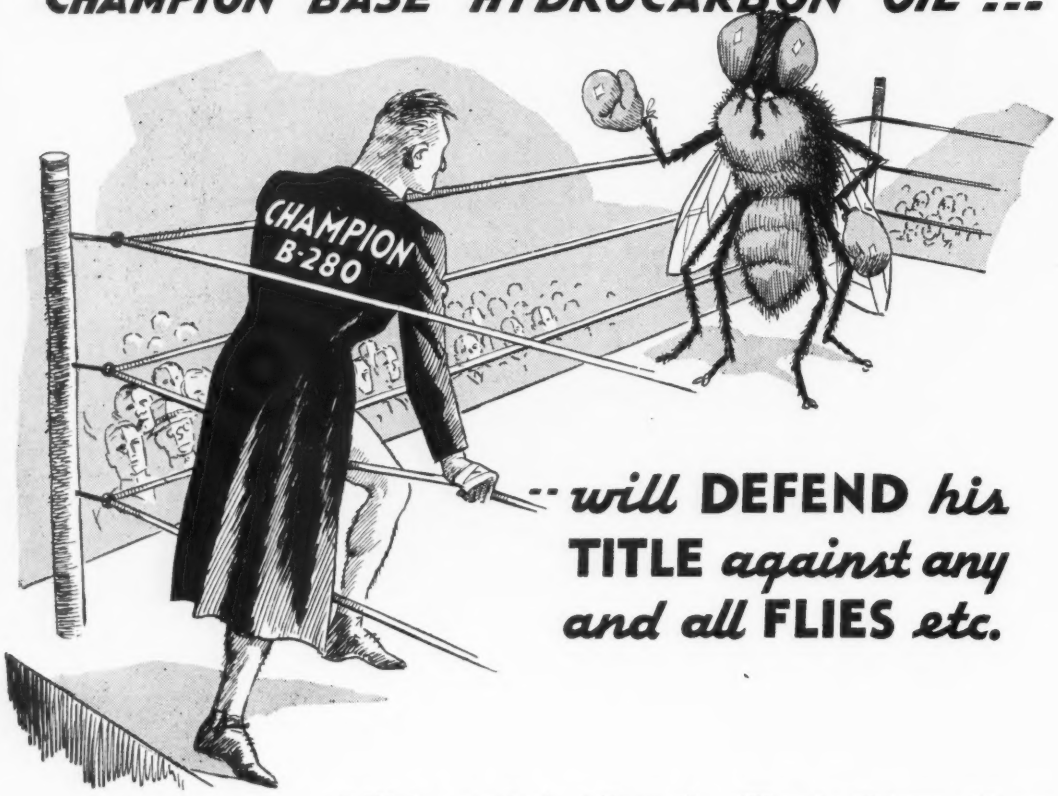

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SANITARY PRODUCTS

A Section of SOAP

Official Publication, Nat'l. Assn. of Insecticide & Disinfectant Manufacturers

EDITORIAL

AWAITING approval before the NRA is the budget of the Code Authority of the Insecticide and Disinfectant Manufacturing Industry. This calls for an annual assessment of two-and-a-half dollars for each one thousand dollars of net sales from each firm in the industry. The funds thus collected will be to defray the expenses of enforcing the code. Offhand, this rate may appear rather high compared to some code budgets. In reality, it is not, being much lower than a number of industries. Outside of a few leading manufacturers who will have to pay very substantial amounts, the average collection will probably be small and will come from a large number of companies.

If the Code Authority bases its budget on figures of the U. S. Bureau of the Census for insecticide and disinfectant manufacturing, we fear that the estimates will fall far out of line. Just a casual glance at the census figures and quick calculations based on raw materials known to go into insecticides and disinfectants, shows that the census is so far from being complete as to be practically valueless. Altogether there are some 1,500 firms in the United States making some quantity of disinfectants and household insecticides. Of this total, probably a thousand make these products incidental to some other line of business. If the Code Authority can actually collect assessments from all manufacturers, we believe they will get far more than any total calculated from the last census. That the census totals are away too low is agreed by a half-dozen authorities in the trade with whom we have talked.

Now as to payment of the assessments when the time comes,—it will be money well invested if the code accomplishes what is hoped, the elimination of a few trade practices which are costing the industry a great deal in profits today. We believe that the Code Authority as constituted is well able to enforce the code, and we believe it will enforce the code if it is given half a chance to do so. Without exception, its membership comprises men who know the business and who will not be easy to hoodwink. The sooner they start putting the pressure on the chiselers, the sooner will conditions improve. They have in their hands a power to do much good, but law or no law, they must have the full cooperation of the industry to accomplish anything. If the attitude of any considerable proportion of the industry is hostile or lethargic, their accomplishments will be limited. If the industry really wants conditions improved and the rotten spots cut out, then it cannot sit back and wait for its Code Authority to perform a miracle.

—•—

AND just in passing, we want to announce that *SOAP* has been elected a member of the A.B.C.,—not the political party which has been blowing things up in Cuba, but the Audit Bureau of Circulations. We now have the privilege when advertising buyers, agency wiseacres, and the generally curious ask about our circulation, of raising the eyebrows, looking slightly annoyed and announcing with smug assurance: "Oh, yes! A.B.C." After counting, combing, picking over, and scrutinizing the circulation of *SOAP* for the past six months, and finding that a sufficient number of you folks paid three dollars per year for the doubtful privilege of reading it every month, they let us in.

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NATIONAL ASSOCIATION OF INSECTICIDE & DISINFECTANT MANUFACTURERS

John H. Wright, Secretary

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Notes of the Trade

Alex. C. Fergusson Co. and Fergusson Labs., have moved their offices from their warehouse and laboratory to Drexel Bldg., 5th and Chestnut Sts., Philadelphia. The removal was occasioned by the need for additional warehouse and laboratory space. Alex. C. Fergusson Co. imports and deals in chemicals, oils and related products. Fergusson Labs. are manufacturers of bulk disinfectants, polishes, liquid soaps, etc. for the jobbing trade.

Samuel H. Bell who has been associated with the Koppers Products Co., Pittsburgh, for the past seven years, severed his connection with that company on Aug. 1. Although not confirmed, it is understood that Mr. Bell is forming his own company which will have its headquarters in Pittsburgh. He has been active in the affairs of the National Association of Insecticide & Disinfectant Manufacturers, and is a member of the Board of Governors of that association.

George Holzapfel, son of Louis Holzapfel, president of Sanco Products, Inc., Greenville, Ohio, died July 22 of heat prostration. George Holzapfel was associated with the sales department of the firm and was well known in the institutional trade in the middle west. He was an ardent sportsman, particularly interested in hunting and fishing. He is survived by his wife and two children, by his parents, a sister, Mrs. Ralph Lammers, and by four brothers, all of whom are associated with Sanco Products, Inc.

Wallace Thomas of the Gulf Refining Co., Pittsburgh, has been chosen a member of the Code Authority for the Insecticide and Disinfectant Manufacturing Industry to succeed W. J. Andree of the Sinclair Refining Co., New York, who recently resigned due to the press of other duties.

J. L. Brenn, president of the Huntington Laboratories, Huntington, Ind., has been awarded the 1934 medal of the Kiwanis Club of that city for the greatest contribution of the past year to the civic betterment of the city. He has been active in the affairs of Huntington city and county for a number of years, having served as head of the board of education and the chamber of commerce, and having been actively identified with practically every welfare organization in that city for the past ten years. He is also a member of the Board of Governors of the National Association of Insecticide & Disinfectant Manufacturers, and a member of the code authority for the industry.

Certified Products Co., Birmingham, Ala., janitors' supplies, has relocated at 500 S. 22nd St.

Changes and Additions to THE PEET-GRADY METHOD

By FRANK C. NELSON*
Stanco Incorporated

AFTER working several years with the room type method of testing insecticides, such as the Peet-Grady method, and a considerably larger room built in 1926 previous to the adoption of the official chamber, 6x6x6 ft., the writer decided that a number of changes would be desirable for the purpose of accuracy and reliability and these changes are being offered as possible additions or substitutions to the method as it is officially set up in the insecticide code. Probably some of them will be too lengthy and detailed to meet with the approval of all testing laboratories and the writer does not believe that the really intensive tests are necessary for ordinary quick check-ups on samples which are more or less routine in nature.

To begin with, it has never seemed entirely satisfactory to set up an arbitrary dosage of 12 cc. with the expectation of obtaining satisfactory kills under any and all conditions. It often happens that flies and other insects used for testing purposes are killed very easily or are much more resistant than usual, thus throwing the results very high or very low as the case may be. Such results are almost useless and the test must of necessity be re-run. The writer has tried for a number of years to breed insects of uniform resistance but it seems to be almost an impossibility and the resistance varies from time to time. Because of these variations a series of dosages has been set up to cover a range in kill which allows for the differences in insect resistance and gives a series of kills running from a low to a very high kill with the normal type of household insecticide now on the market.

With such a series of dosages there is then at least one which will give approximately 50 per cent dead in 24 hours even though the sample may be very poor or very good. With the present set-up of a minimum kill of 60 per cent and a possibility of even higher results, it does not seem that the most satisfactory comparisons can be expected.

Along with the series of dosages set up for kill, it was also felt that some provision should be made to give a more detailed picture of the initial action of any sample being tested. For this reason observations were included whereby the speed of paralysis could be determined, as well as the final kill. By including readings of this nature, it is possible to plot curves showing paralysis and kill reactions for low, normal and high concentrations on most any type of liquid insecticide. This gives a more complete picture of what the product will do under various conditions of use.

All such additions to the method, of course, require much more time than the regular Peet-Grady method as set up in the Association and also require that the operator be somewhat more skilled and well-trained in observational work. The writer feels that the additional information obtained is well worth the time involved and all important samples are being tested in our laboratory by this more detailed method.

After a number of preliminary trials, it was found that dosages of 5 cc., 10 cc., and 15 cc. of the better insecticides gave the most satisfactory results. However, if we know to start with that a sample is especially weak, we include an additional dosage of 20 cc. to make certain that the higher kills are obtained. With this series of dosages, we practically always obtain at least one set of figures that falls within the 40 to 60 per cent range and under normal conditions the 10 cc. dosage usually gives us the proper kill. The 5 cc. and 15 cc. dosages give kills considerably below and above the optimum and help to fill out a more detailed picture in considering an unknown sample. To the kill results, of course, are added the additional paralysis readings as previously mentioned. We have found that the speed of paralysis is quite often a more satisfactory indication of the actual pyrethrin content of a sample than the final kill. A quicker drop does not always indicate a higher final kill and a higher final kill, of course, does not always mean a high pyrethrin content. These paralysis readings were determined after a number of trials and the two and five-minute periods seemed to be the most satisfactory for the intermediate readings. The regular 10-minute final count is, of course, taken when the flies are removed from the testing chamber.

In the case of the 5 cc. dosage, the speed of paralysis is so slow that it is useless to make any other reading than on the 5 and 10-minute periods. The two-minute period is used only for the 10, 15 and 20 cc. dosages.

In order to facilitate these readings, a small alteration was made in the construction of the two test rooms. One observation window was projected inwardly about 9 inches so that a complete view could be had of the entire room without going to the other side of the room. This reduced the actual cubical contents of the room slightly but not enough to make any serious difference. Plate No. 1 shows this window as installed.

A detailed test of this description calls for the use of 1,000 flies for each dilution, making a total of at least 3,000 flies for each sample. If the method as used is set up without the addition of a standard sample, this would, of course, mean 3,000 flies per test. The writer, however, feels that one of the greatest weaknesses of the official method is the lack of a satisfactory comparative standard whereby the toxicity of an unknown sample can be measured from day to day regardless of the ordinary variations in the test insects. For this reason, we have always maintained a standard check sample of an insecticide which we know by field tests and other tests to be representative of the best of the commercial products being offered. This standard check sample is run alternately alongside of any unknown sample and this, of course, requires a total of 6,000 flies for a complete test. These two samples require about five days for one complete test as two rooms are operated by one man. If only one room is in use, the amount of time necessary is limited only by the time required to properly air and clean out the room between sprayings. This time can then probably be reduced to three or three and one-half days. While this may seem a rather long time for one test only, we feel that a thorough test of this sort is worth a great deal more to us than a test about which we are somewhat uncertain and we prefer to run fewer samples with the assurance that they are absolutely accurate. This is especially true in the research type of sample which might eventually lead to changes in the product. For the ordinary testing of competitive products when only a moderately accurate and quick check-up is desired, we still feel that the regular adopted method is moderately satisfactory if a standard check sample is adopted.

A sample record sheet follows just as a suggestion to

*Read before the 20th Mid-Year Meeting, Natl. Assn. Insecticide & Disinfectant Manufacturers, Chicago, June, 1934.

anyone who might wish to try out this revised test. An extra space is allowed for the number of flies downed in case it is decided to include a greater number of readings. Following this sample record sheet are two tables and two graphs. The first table and graph is a summary for a complete test, as described, showing the percentage of flies paralyzed at the various reading times for the three dosages. The second table and graph is a summary for the two samples but shows the percentage of moribund and dead under the same conditions. These results represent an actual test on two samples very similar in strength, both in their paralyzing effect and final kill. An examination of the results as shown in the tables and graphs will readily show their close similarity.

In considering graph No. 1, it will be noted that the two-minute location point is missing for the 5 cc. dosage as previously indicated in the description of the method. Inasmuch as both the 10 and 15 cc. location points for the two-minute reading lie almost in a straight line to the 5 cc. dosage, it is reasonable to believe that the 5 cc. location point would fall somewhere nearly as indicated. With the 5 cc. dosage, both samples A and B show a very slow paralysis effect for the first five minutes but lie within a close proximity of the higher concentrations at the final reading. The 10 and 15 cc. dosages show a rather rapid increase in the number downed up to the five-minute period and then show only a very slight additional number downed during the last five minutes, with only a moderate final drop. This final drop should more nearly approach the 100 per cent mark if the sample was of satisfactory strength.

It is interesting to note that the low concentration brings down nearly the same number of flies that the higher concentrations do, although it requires a longer period of time. This might readily explain the unfavorable reaction of a consumer to an insecticide which has a slow initial paralysis even though it might give a good final paralysis and kill. These results immediately point out to the tester that both the initial paralysis and the

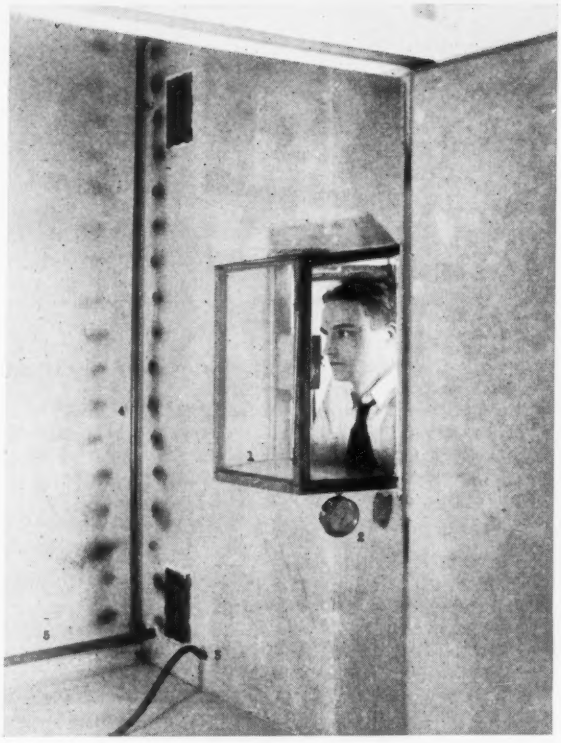

Plate No. 1

View of inside of Peet-Grady Chamber showing special observation window. 1. Observation window. Glass on all sides, top and bottom. 2. Humidity in-

TABLE No. I

Percentage of flies down at the times shown for two samples at three different dosages

Sample A								*Sample B*							
5 cc.		10 cc.			15 cc.			5 cc.		10 cc.			15 cc.		
5 Min.	*10 Min.*	*2 Min.*	*5 Min.*	*10 Min.*	*2 Min.*	*5 Min.*	*10 Min.*	*5 Min.*	*10 Min.*	*2 Min.*	*5 Min.*	*10 Min.*	*2 Min.*	*5 Min.*	*10 Min.*
36	90	38	78	93	43	93	97	39	75	31	88	92	35	89	99
50	91	37	84	89	51	85	92	26	81	33	79	88	39	79	91
41	88	16	76	86	34	82	91	33	72	15	69	79	30	84	92
36	68	27	75	83	22	79	89	32	76	17	81	90	19	84	88
23	53	14	62	70	37	75	78	29	64	27	72	80	28	58	71
21	49	21	69	76	23	78	84	27	52	29	75	83	19	73	83
34	73	21	81	86	19	82	84	31	58	30	68	74	26	72	83
30	70	31	66	80	36	77	85	43	71	23	70	81	28	79	85
46	71	15	72	80	20	73	80	22	62	13	57	35	23	68	75
22	52	18	59	67	26	76	85	26	47	23	62	71	33	65	77
339	705	238	722	810	311	800	865	308	658	241	721	773	280	751	844
Average:															
34%	71%	24%	72%	81%	31%	80%	87%	31%	66%	24%	72%	77%	28%	75%	84%

TABLE No. II

Percentage of flies dead and dead and moribund for two samples at three dosages

Sample No. 1						*Sample No. 2*					
5 cc.		10 cc.		15 cc.		5 cc.		10 cc.		15 cc.	
Dead	*Dead and Moribund*	*Dead*	*Dead and Moribund*	*Dead*	*Dead and Moribund*	*Dead*	*Dead and Moribund*	*Dead*	*Dead and Moribund*	*Dead*	*Dead and Moribund*
21	31	51	63	82	90	9	9	47	53	66	75
56	63	63	67	66	78	31	31	37	41	55	61
50	53	55	57	82	84	29	35	41	44	83	92
19	31	26	27	56	73	35	39	42	48	43	50
15	17	29	34	52	53	21	24	32	33	26	30
20	20	40	48	39	43	10	12	37	40	29	32
24	34	47	52	49	61	20	24	24	26	36	42
24	31	38	48	50	63	7	7	39	43	48	56
24	32	32	47	34	53	13	13	20	29	30	36
14	20	27	39	35	53	14	14	24	35	19	23
267	332	408	482	545	651	189	208	343	392	435	497
Average:—											
27%	33%	41%	48%	55%	65%	19%	21%	34%	39%	44%	50%

dicator. 3. Steam inlet to control humidity. 4. Air line for exhausting the chamber. Used in place of an exhaust fan. 5. Steam heating pipe.

Plate No. 2

This plate shows the storage racks for treated flies to prevent their escape in the laboratory. 1. Trap cage for recovered flies. 2. Wire recovery cages. 3. Hinged doors to prevent the escape of recovered flies. 4. Time clock. 5. Record book. 6. Counting machine. 7. Colored glass sample bottles.

final kill must of necessity be improved to make the product satisfactory.

Continuing to graph No. 2, we see the story completed for these two samples with the dead and moribund and dead curves. It is evident at a glance that the 24-hour kill for the 5 cc. dosage is extremely low in spite of the fact that almost as many flies are brought down in 10 minutes as were downed with the higher dosages. The kills are so low for the 5 cc. dosage that taken by themselves they would be very unreliable as an indicator of the value of the product. Because of the possibility of further consideration on the 10 and 15 cc. dosages, we see that the relative difference between the two samples remains about the some throughout the test and any one of these points might in this instance have been used with entire satisfaction. The final kill with the 15 cc. dosage is, of course, not nearly high enough and may be due either to unusually resistant flies or to a poor quality insecticide. The exact reason makes no difference in this result as the test was designed to show intrinsic value of each sample in relation to each other rather than the degree of final kill.

A second test is included showing the same type of test but with two samples which we knew ahead of time would show a rather widespread difference in final kill but little difference in initial paralysis.

Table and graph No. 3, showing percentage downed at the various periods indicated, are very similar to those shown in table No. 1. Table and graph No. 4 shows a somewhat different picture than the previous set of samples in that the difference in final kill is much greater. The general results are very similar and no discussion is necessary. Hundreds of tests of this degree of completeness have been run over a period of years and we are certain that this method of testing is entirely reliable and gives a much more satisfactory picture of the value of an unknown insecticide than does the short method now in use.

TABLE No. III

Percentage of Flies Down at the times shown for two samples at three different dosages

Sample A								*Sample B*							
5 *cc.*		10 *cc.*			15 *cc.*			5 *cc.*		10 *cc.*			15 *cc.*		
5 *Min.*	10 *Min.*	2 *Min.*	5 *Min.*	10 *Min.*	2 *Min.*	5 *Min.*	10 *Min.*	5 *Min.*	10 *Min.*	2 *Min.*	5 *Min.*	10 *Min.*	2 *Min.*	5 *Min.*	10 *Min.*
41	74	27	73	83	38	79	87	32	57	19	66	79	27	81	92
42	72	41	81	89	40	86	89	29	69	21	66	77	44	89	91
45	70	34	70	78	44	88	92	38	64	33	75	86	36	86	94
39	75	29	62	75	39	78	90	43	70	34	66	77	32	69	82
40	84	24	65	83	39	85	94	43	68	21	64	87	37	77	83
36	63	35	83	93	32	83	87	33	64	32	77	86	23	79	89
43	82	25	70	84	31	86	95	37	88	25	75	85	36	86	95
35	85	21	55	70	31	73	86	30	81	32	85	91	25	82	89
29	58	36	81	89	29	78	88	31	78	27	68	89	33	77	88
40	75	24	81	87	31	71	89	33	57	21	70	81	34	77	82
390	738	296	721	832	354	807	897	349	696	265	712	838	327	803	885
Average:—															
39%	74%	30%	72%	83%	35%	81%	90%	35%	70%	27%	71%	84%	33%	80%	89%

TABLE No. IV

Percentage of flies dead and dead and moribund for two samples at three dosages

Sample No. 1						*Sample No.* 2					
5 *cc.*		10 *cc.*		15 *cc.*		5 *cc.*		10 *cc.*		15 *cc.*	
Dead	*Dead and Moribund*	*Dead*	*Dead and Moribund*	*Dead*	*Dead and Moribund*	*Dead*	*Dead and Moribund*	*Dead*	*Dead and Moribund*	*Dead*	*Dead and Moribund*
43	59	31	66	39	68	12	19	21	21	31	36
6	11	44	66	43	64	4	7	25	27	46	56
5	7	24	34	52	66	5	5	10	10	22	26
24	35	38	48	65	78	29	29	25	25	36	39
39	62	51	64	64	83	8	9	29	29	26	26
4	5	57	73	56	76	7	7	19	21	41	43
46	52	42	49	65	74	13	13	32	32	35	35
22	22	36	38	53	71	11	11	26	26	36	36
34	38	67	72	75	79	14	14	28	28	33	33
42	46	48	60	67	70	21	23	33	33	49	49
265	337	438	570	579	729	124	137	248	254	355	379
Average:—											
27%	34%	44%	57%	58%	73%	12%	14%	25%	25%	36%	38%

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Aside from the points of change already discussed, there are some other things in the official method with which the writer is not satisfied. Some of them are minor considerations but all of them do affect the tests to a certain degree. The other major objection previously mentioned in this discussion is the method of setting up a minimum final kill as a basis for accepting or rejecting an insecticide according to the official method. If it were possible to breed insects which did not vary from day to day or week to week, then some such minimum standard might very well be accepted, but inasmuch as it seems to be almost impossible to breed such uniform insects over a continuous period of time, the writer fails to see where an arbitrary minimum standard of this type is fair as a basis for judgment of any sample.

A Deocene check on the fly resistance was suggested and still remains in the official method. This allows the judging of fly strength on the basis of running one or two tests early in the morning before starting the day's work and if more than 20 per cent of the flies are brought down they are considered too weak to use, and if more than 6 per cent die in 24 hours, the flies are unsatisfactory. No attempt is made to measure superior resistance. The writer has never been able to understand how this could be used as a satisfactory measure of fly resistance when such few tests were used as a basis of judgment. It is impossible, of course, to get the actual kill under the 24-hour period, which means that the fly resistance is not actually determined until after the test is run.

Aside from this, the method calls for at least 1,000 flies per sample and yet only a few hundred flies are used as a fly resistance measure which seems rather inconsistent. Further than that, if a testing laboratory is to be run continuously with a large number of samples always in demand, it is an absolute impossibility to discontinue the testing work when the flies happen to be slightly weaker or stronger than normal. This variation was really what caused the setting up of the several dosages previously described and also caused us to set up a standard sample which we knew from field results was absolutely satisfactory from a practical standpoint. We use a standard sample as an indicator, not on the strength of flies but as an actual comparison to the unknown sample and we completely disregard the slight variations in fly resistance. We do not make any attempt to run 1,000 flies on one sample during any one day but we prefer to alternate samples as frequently as possible in order to eliminate any variation in fly resistance, i. e., sample No. 1 is sprayed into the chamber at eight o'clock; sample No. 2 at 8:20 or 8:30, depending on the time allowed for airing; sample No. 3 at 9:00; sample No. 1 at 9:30, and alternating in this manner throughout the day until the same number of tests are run on No. 1 that are run on No. 2 and No. 3 during any one day. If the unknown samples are equal to the standard in both paralysis and kill, the sample is accepted as satisfactory regardless of whether it requires 15 cc. to give 50 per cent kill or whether it requires 5 or 10 cc. to give a 50 per cent kill. In this way the results do not have to be thrown out even though the flies may be slightly more or less resistant than usual.

The question as to the proper standard control sample is, of course, still unsettled and there seems to have been little or no work done, at least as far as the Standardization Committee is concerned, in an attempt to find some such satisfactory standard. As previously discussed, a sample containing pyrethrum and oil is not acceptable because of the impossibility of duplicating such a sample over long periods of time. The ideal standard would, of course, be a pure chemical substance which could be obtained without any question of variability at any time. A few pure hydrocarbon oils such as Tetradecane, n-Decane, (Di-iso-Amyl) Decane, Mesitylene, Tertiary Amylbenzene, and others are so expensive that their use is out of the question. (*Turn to Page* 97)

TABLE No. V

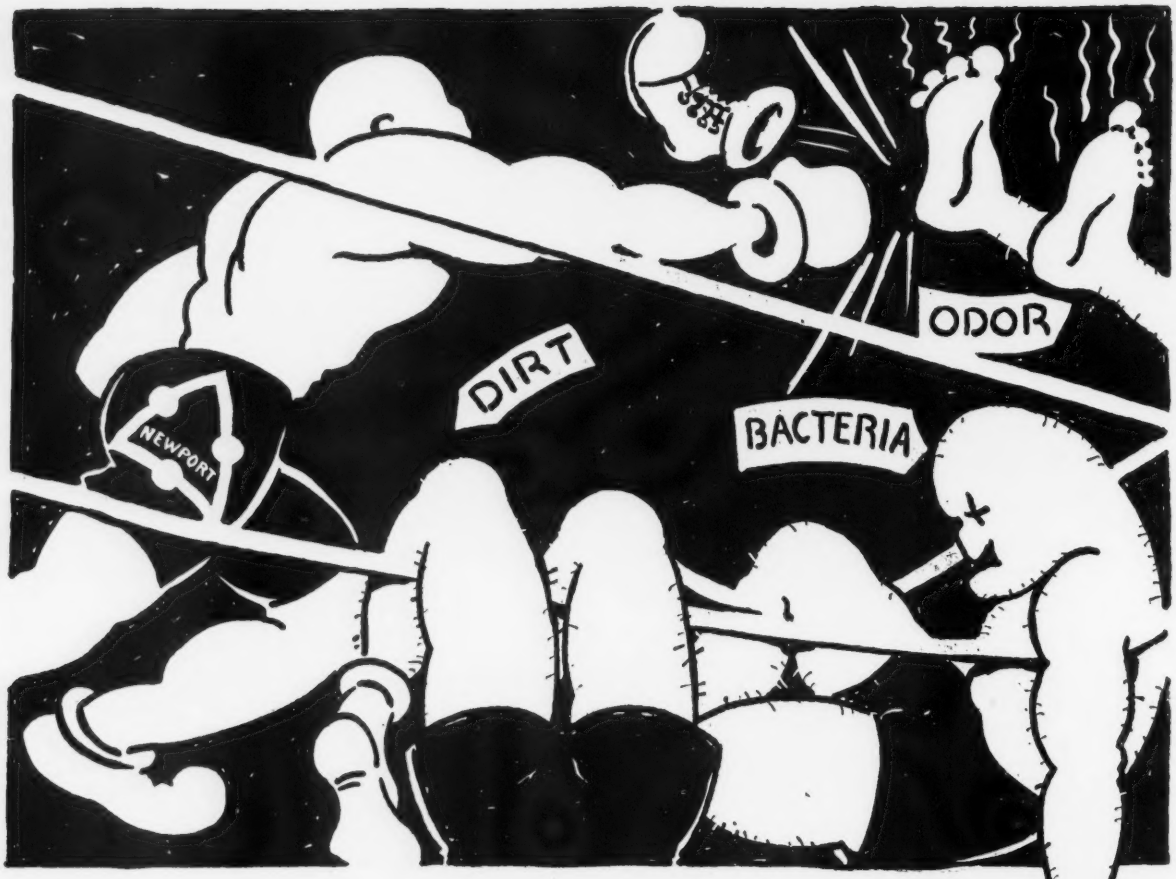
Percentage of flies down at the times shown for two samples at three different dosages

Sample A — *Benzophenone and Water White Base*								*Sample B* — *Commercial Fly Spray*							
5 cc.		10 cc.			15 cc.			5 cc.		10 cc.			15 cc.		
5 Min.	10 Min.	2 Min.	5 Min.	10 Min.	2 Min.	5 Min.	10 Min.	5 Min.	10 Min.	2 Min.	5 Min.	10 Min.	2 Min.	5 Min.	10 Min.
45	77	46	85	90	61	90	97	38	64	61	92	95	50	94	98
40	77	59	74	93	52	90	97	42	84	48	86	94	54	93	97
45	92	42	90	94	81	85	100	34	85	55	84	87	65	91	98
55	92	40	91	97	60	92	98	44	85	58	93	97	71	98	100
55	85	51	82	93	54	90	96	55	85	39	85	90	58	90	95
38	84	47	90	97	60	91	96	41	90	52	89	94	63	90	95
58	81	30	70	83	40	72	80	51	83	34	71	81	56	77	86
48	85	49	81	95	56	88	94	52	90	44	87	94	58	90	96
40	67	39	81	94	38	82	95	53	83	52	87	95	46	88	98
53	87	26	82	91	42	88	96	48	86	38	83	89	52	92	95
477	827	429	826	927	545	868	949	458	835	481	857	916	573	903	958
Average:—															
48%	83%	43%	83%	83%	55%	87%	95%	46%	84%	48%	86%	92%	57%	90%	96%

TABLE No. VI

Percentage of flies dead and dead and moribund for two samples at three dosages

Sample No. A — *Benzophenone in Water White Oil Base*						*Sample No. B* — *Commercial Fly Spray*					
5 cc.		10 cc.		15 cc.		5 cc.		10 cc.		15 cc.	
Dead	Dead and Moribund	Dead	Dead and Moribund	Dead	Dead and Moribund	Dead	Dead and Moribund	Dead	Dead and Moribund	Dead	Dead and Moribund
33	42	57	79	72	88	20	27	50	73	68	85
29	40	68	80	73	86	21	34	44	57	61	81
62	69	73	89	85	87	28	39	57	66	62	79
60	66	73	80	85	93	28	40	67	74	75	84
39	41	63	75	88	90	24	34	42	59	71	81
40	42	73	77	84	90	32	41	65	77	69	81
23	23	39	46	35	38	33	44	31	47	42	56
28	30	58	60	66	77	41	58	62	72	67	75
19	21	43	50	75	76	35	43	54	74	80	88
33	35	57	58	62	63	53	56	52	61	66	85
366	409	604	694	725	788	315	416	524	660	661	795
Average:—											
37%	41%	60%	69%	73%	79%	32%	42%	52%	66%	66%	80%



NEWPORT PACKS AN AWFUL *Wallop*

—puts new punch in cleaning compounds

. . . it produces a cleanser that "knocks 'em for a loop". There's no "shadow boxing" here.

NEWPORT HEAVY WHITE PINE OIL

puts a two-fisted wallop into cleaning compounds . . . a wallop that K O's the toughest job in the early rounds.

Producers also of Newport Steam Distilled Rosins, Turpentine and Dipentene.

GENERAL NAVAL STORES COMPANY, INC.

Address Main Office: *230 Park Avenue, New York City* NEWPORT Plants: *De Quincy, La.; Pensacola, Fla.; Bay Minnette, Ala.*

Containers and Sales

By J. C. BENNETT*
Wilson & Bennett Mfg. Co.

CONTAINERS as Related to Sales is re-worded "The Sales Appeal of Containers." My experience being almost entirely in the distribution of packages of a gallon or larger in size, more than likely you will find most of my remarks referring to that field. However, there are many places that the same comparisons apply to the problem in other fields. This question, as well as most sales problems, are in time answered for us by our customers. Or, re-stating from another angle, those of you who properly analyze your customers' ideas and adapt your packages to their wishes will be more successful than those who do not.

The first specification is Rule 40, Consolidated Freight Classification No. 8 and its supplements which covers barrels, drums, kits, and pails made of aluminum, iron or steel as covered by section 5 on pages 22 and 23. All of this specification means that legitimate containers are made to these standards, and have the gallonage, the gauge, the year of manufacture and the manufacturer's name or symbol embossed on the bottom of every container. It would be extremely dangerous for any manufacturer to use a lighter gauge material than that embossed on the container and it would be foolish for him to put in a heavier gauge than required. After all, you haven't much to worry about on these points. Design, construction and capacity are about the most important factors for you in the purchase of containers.

Were I to make up a formula for containers as related to sales, and I am neither artist, advertising expert, student nor specialist, I would stop and attempt to get the consumer's economic viewpoint on which to base most of my conclusions. I feel sure you will find his viewpoint one of the most important, if not the most important. It is true that each product of yours presents a different packing problem, and oftentimes different sized packages of the same product present different problems.

Getting back to the formula, there are six (6) important questions to be asked about each sales problem:

1. How does your customer receive your product; from whom:—meaning quantity per package, quantity of packages, means of transportation and delivery up to the point that the consumer gets it and then if there is further transportation after the consumer gets your product?

Illustrating the above, you have products that are sold in carload quantities and delivered to a consumer who has a sidetrack, who empties one or more complete units each time he uses your product. You also have other products that go to the bakery, the florist, or the farmer, which is handled through a wholesaler, or the consumer picks up the merchandise at a local store and uses anywhere from a couple of spoonsful to possibly a quart at a time, probably keeping your package indefinitely in or about the customer's establishment.

Considering the first point,—the practicability of the container for shipping and storage is the factor of most importance. The size of the package and its decoration or advertising value is more or less secondary. The problem there to consider is—does the container adapt itself to carload shipment, the storing in the warehouse and the emptying as required by the customer? And, last but not least, can the container be utilized after it is empty, for the storage of other materials, for the shipment of some of the customer's products, or can it be sold? If the container is of such construction that it has a re-sale or second-hand value, this will obviate the necessity of accumulating quantities of containers that get in the way and later have to be trucked to the dump?

Factor No. 2, and this overlaps Number 1 in some points:—How are the contents removed,—all at once or small quantities at a time? In other words, who uses your product,—an industrial establishment, a housewife, a chemist or a baker? The simplicity of handling the container, in opening and closing and the device for dispensing from the container are important particularly when it is used by the small consumer and a little has to be taken out at a time, perhaps for diluting or mixing. This pouring or dispensing arrangement must be such that small or large amounts can be accurately removed. Here, too, the container must be so made that your instructions for mixing can be clearly placed on it and easily read and followed.

If it is necessary that the formula be adhered to, I feel definitely that it is necessary that you make it convenient to follow the formula rather than attempt to oppose human nature, as the producer who does make it convenient will naturally have reports of better success from users of his material than possibly some competitor's material where the consumer has had difficulty in measuring out the required quantity.

Third Factor:—This is also related to the first and second. Are the surroundings under which the product is used very clean or very dirty? Is it in a private home, a farmyard, a beauty parlor or a bakery? In analyzing this phase, I would say that for the dirty or outdoor point of consumption, you should by all means use dark colored containers and if you use decorating, put it on in very large letters.

On the other hand, if the container is used in a bakery or a beauty parlor, light colored containers with fancy decorations are usually preferred because they will, generally speaking, be kept clean and orderly and they will not be knocked around and marred up.—furthermore, their appearance bespeaks cleanliness or sanitation. Bearing this in mind will guide you to proper package decoration more than anything else.

The Fourth Factor is important in itself but does not apply to all conditions,—that is, relative to your products being poisonous or dangerous. Some of your products are highly inflammable, some of them are poisonous and yet are frequently used around establishments preparing food.

The construction of containers for this class is a little heavier than the ordinary and the sealing of such containers should be more carefully watched to avoid the possibility of spilling, slopping or the accidental spreading of any of this product. The container should be so constructed that the danger of damage in transit or handling, causing leakage, is definitely eliminated.

The Fifth Factor refers only to those of your products, the handling of which requires specific instructions. You first have to consider in this case whether the party getting the instructions is a farmer, a housewife, or a skilled chemist. Let us consider the farmer or housewife, who has little or no knowledge of your product or the handling of it. The instructions must naturally be worded differently than a similar explanation to business institutions, who have one or more chemists in charge. The size of the print should be larger and the language simpler.

The Sixth and last factor:—Is the package going to be an asset or a liability when it is empty? By this, I mean, can your customers use it for the storing of other products,—can your customer use it by re-painting and shipping some of his products in it,—can your customer

* Address before 20th Mid-Year Meeting, Natl. Assn. of Insecticide & Disinfectant Mfrs., Chicago, June, 1934.

DU PONT
PARA-DICHLOROBENZENE
is pure, white, uniform . . . and is made in various sizes to meet specific requirements of processing or repacking . . . Send for prices and samples today.

•

DU PONT

ORGANIC CHEMICALS

E. I. DU PONT DE NEMOURS & CO., INC.
ORGANIC CHEMICALS DEPARTMENT
WILMINGTON, DELAWARE

sell it, tnus obtaining a small revenue from what would be a liability if the package had to be accumulated and then carted away to a dump?

The frequent use of your package, particularly by smaller consumers, such as farms and private homes (and they are far in the majority in number over the business houses) makes the container an important advertising medium if properly decorated. Then if your package is such that it has a utility value after the product is used, your name remains before that customer as long as the decorating can be read. Under present-day manufacturing conditions, I have seen this decorating last for three years out in the weather.

I have seen small steel packages used as refuse buckets in private homes around the city, for the collecting and saving of odds and ends in garages, for water buckets on farms, for the storage of feed and grain. I have personally used the buckets up in the North Woods as minnow buckets, and for other uses necessary, but not mentionable.

Then getting to the re-use of the package from the industrial standpoint. If your container is of the proper type it will be re-used and this has a definite appeal to many who buy your product. Manufacturers are using the packages in which they receive their raw materials for the handling of other commodities and for the storing of products that have been shipped to them in other inadequate packages where the product is efflorescent or deliquescent.

Also some manufacturers are accumulating these packages and selling them to the re-condition barrel people. This, of course, is considerably more profitable than having to spend time to collect and destroy or cart away as refuse the remains of packages no longer fit for further service.

I necessarily had to take the rule as my measure rather than the exceptional example, of which there are many. I shall be glad to go on and illustrate with examples any particular questions regarding any of these six factors that you care to ask. I have made no effort to confine my discussion to products we manufacture. I have reputable competitors who can supply similar containers or who might duplicate everything we produce. As I said to start with, many of the statements made apply to other than steel packages. I feel fairly positive that they apply to the bulk of conditions relative to steel packages.

THE subject of decorating containers may or may not be considered by you as applying to containers as related to sales. I have put this up to your executives and they have asked that I give you a few words on this phase of the situation. Taking up this important side of your advertising and selling program, the first and most important factor to consider is the reason for the decorated container. We know that display is one of the most important and effective forms of advertising and by the same token salesmanship. From some viewpoints, the decorated container is a necessity,—by this I mean, where formula instructions of use and governmental restrictions require a certain amount of **decorating**. All these bring out the necessity of some form of **decorating**. So why not use this possible advertising opportunity?

It is, of course, possible to use the paper label. The paper label, if the package is handled carefully and is not exposed to the weather, will perform the same functions as far as giving the information and a certain amount of advertising is concerned. However, it is not permanent. It will not stand the weather or rough handling in transportation without becoming damaged and when you remove part of it, you have removed sufficient to make the balance useless.

Summing this up, attractive advertising can be accomplished at the same time you are giving the instructions for the proper use of your product. You should bear in mind in doing this advertising, the cleanliness of the place the package is to be used, and the cleanliness of the operators using the package and product. There is consid-

DEO-BASE

Reg. U. S. Pat. Off.

No Kerosene Odor-

The time is close at hand when all liquid insecticides will have to be free from that tell-tale residual odor of kerosene. It is one of the greatest sales obstacles today. Eliminate it by using DEO-BASE—a petroleum oil refined to complete freedom from kerosene odor.

—•—

Liquid insecticides made with DEO-BASE find ready acceptance by housewives, the best hotels, dairies, bakeries, clubs, food markets . . . in fact, wherever the kerosene odor of ordinary sprays is found objectionable.

—•—

DEO-BASE conforms in every detail with the specifications of the National Association of Insecticide & Disinfectant Manufacturers.

L. SONNEBORN SONS, Inc.

Refiners of White Oils and Petrolatums

New York Office
88 Lexington Avenue

Refineries { Petrolia, Pa. / Franklin, Pa.

Chicago Office
820 Tower Court

erable difference in the decorating possible on a package of hog dip in comparison with a package of shampoo soap that is to be used in a beauty parlor. Dark backgrounds and dark colors with large colored letters are always advised where the place that the package is to be used is dirty.

In the case of packages for the use around a home, bakery or beauty parlor, lighter colors may be indulged in, bearing in mind, however, that your men in handling and filling that package, must be extremely careful that it does not become unsightly before it gets to the beauty parlor or bakery.

The printing of instructions in fine print on such packages is a simple matter. I advise against the use of fine print on these larger steel packages wherever possible. The advertising trade mark or name should be readly visible at 25 feet, minimum, preferably 50 feet.

I recommend in your outlining of advertising on packages that when possible you give the producer of the package a little liberty in design and color, as they very often can make recommendations to your interest and to your advantage, based on their previous experience and history of having produced other similar packages and received other customer's reactions.

—— ♦ ——

McCORMICK BALL TEAM HEADS LEAGUE

One of the strongest amateur baseball teams in the east this year is representing McCormick & Co., Baltimore, in the Reliable Industrial League of that city.

Not only is the team heading the strongest amateur baseball league in and around Baltimore, with eight games won and one lost, but it has had considerable success in outside competition. Late last month, the McCormick team played the United States Marines from Quantico, Va. at Oriole Park in Baltimore before 5,700 people and emerged victor by a score of 9 to 3. Dr. A. E. Badertscher of McCormick & Co., who is well-known in insecticide circles and who has been active in the affairs of the National Association of Insecticide & Disinfectant Manufacturers, manages the team. Charles P. McCormick, president of McCormick & Co., takes an active interest in the affairs of the company's most successful team, his interest dating back to his own athletic activities at Johns Hopkins some years ago.

The team is made up entirely of McCormick employees. In the picture are, back row, left to right: Lester W. Jones, President, McCormick Athletic Club; Wagner, Harris, James, Taylor, Resaw, Johnson, Disney and Badertscher. Front row: Butt, Meyers, Gill, Bauer, Hudgins, Sparra and Talton.

Barrett Standard

CHEMICALS

Barrett Standard Chemicals are produced to strict specifications under rigid scientific control. The result is uniformly dependable, high-quality products.

A competent Barrett Technical Staff will gladly assist you in production problems involving the use of Barrett Standard Chemicals. Phone, wire or write.

♦

BARRETT STANDARD CHEMICALS

PHENOL (Natural)
U. S. P. 39.5° M. Pt. and 40° M. Pt.
Technical 39° M. Pt.
Technical 82-84% and 90-92%

CRESOL
U. S. P., Meta Para, Ortho, Special Fractions.

CRESYLIC ACID
99% Straw Color and 95% Dark.

XYLENOLS

TAR ACID OILS

NAPHTHALENE
Crude, Refined Chipped, Flake and Ball.

PYRIDINE
Refined, Denaturing and Commercial.

HYDROCARBON OIL . . . BENZOL . . . TOLUOL . . . XYLOL . . . SOLVENT NAPHTHA . . . HI-FLASH NAPHTHA

TRADE B MARK

THE BARRETT COMPANY
40 RECTOR ST. NEW YORK, N. Y.

PROGRESS

THE Insecticide and Disinfectant Industries Have Been Making Rapid Progress. New Products—New and Improved Solvents, the Use of New Chemicals Have Characterized Their Initiative.

Felton Chemical Co., Inc., Have Kept Step with This Progress by the Steady Development of Odors and Aromatics Scientifically Designed and Tested, to Be Best Suited for Each Particular Purpose.

★

FORMAROMES	For Formaldehyde Preparations and Sprays.
CARBOROMES	For Carbolic Acid, Phenol and Cresylic Acid Preparation.
SPECIAL ODORS	For Orthodichlor Benzene, Carbon Tetrachloride, etc., Which Are Coming into Daily Greater Use. And, of Course, Our Well Known Lines of
COLOROMES	(Perfume and color combined) For Para and Naphthalene Blocks.
VITAFLORS AND KEREXES	To Neutralize and Perfume Mineral Spirit Fly Sprays.
AQUAROMES	(Water Soluble Perfume Oils) For Liquid Soaps, Theatre Sprays, etc.

FELTON CHEMICAL CO. HAVE FURTHERMORE TAKEN COGNIZANCE OF THE KEEN COMPETITION EXISTING IN YOUR INDUSTRY, AND HAVE PRICED THEIR PRODUCTS ACCORDINGLY.

● LET US KNOW WHAT YOU ARE MAKING AND WE WILL SEND YOU LIBERAL SAMPLES OF ODORS BEST SUITED FOR YOUR PRODUCTS.

FELTON CHEMICAL COMPANY, INC.

603 JOHNSON AVENUE, BROOKLYN, N. Y.

AROMATIC CHEMICALS — NATURAL ISOLATES — PERFUME OILS — ARTIFICIAL FLOWER & FLAVOR OILS

Stocks carried in following cities:

Chicago, Ill.
1200 N. Ashland Ave.

New Orleans, La.
ROBERT E. FELTON
Balter Bldg.

St. Louis, Mo.
KEIFFER SALES
& ADV. SERVICE
1014 Locust St.

A COMPLETE SERVICE FOR THE WEST
FELTON CHEMICAL CO. INC.
515 So. Fairfax Ave.
Los Angeles, Calif.

I. & D. CODE OFFICERS CHOSEN

Dr. Robert C. White of the R. C. White Co., Philadelphia, has been chosen permanent chairman of the Code Authority of the Insecticide and Disinfectant Manufacturing Industry. William B. Eddy of the Rochester Germicide Co., Rochester, N. Y. is secretary and W. G. Griesemer of the Black Flag Co., Baltimore, is treasurer. Wallace Thomas of the Gulf Refining Co., Pittsburgh, has been elected a member of the Code Authority to replace W. J. Andree of Sinclair Refining Co., New York, who recently resigned due to the pressure of other duties with his company.

The by-laws and budget for the code enforcement are at present on file with the NRA awaiting approval. The budget calls for an assessment annually of $2.50 per thousand dollars of net sales. The important committees have been appointed for national supervision of trade practices and complaints, and for cost finding. These national committees will be supplemented by the appointment of regional committees in various parts of the country. The Trade Practice Committee which will hear all complaints for violation of the code is made up of W. J. Zick of Stanco, Incorporated, New York, chairman; G. A. Altenbern, Midway Chemical Co., Chicago; M. M. Marcuse, West Disinfecting Co., Long Island City, N. Y. The Cost Finding Committee is composed of W. G. Griesemer of Black Flag, chairman; R. W. Birdsall, Derris, Inc., New York; W. B. Eddy, Rochester Germicide Co., Rochester, N. Y.; Melvin Fuld, Fuld Brothers, Inc., Baltimore; G. A. Altenbern, Midway Chemical Co., Chicago. The next meeting of the Code Authority will be held some time late in August.

—— ♦ ——

How-Glad Manufacturing Co., New York, has been formed by Joseph H. Zwick, formerly production manager for the Creco Company, Long Island City, to manufacture liquid soaps, deodorants, floor specialties, and allied sanitary products. The How-Glad company is located at 79 East 130th Street, New York.

—— ♦ ——

Sherwood Petroleum Co., Brooklyn, is mailing to the trade a four page folder entitled "What Is the Peet-Grady Test." Insecticide manufacturers are invited to visit the Sherwood insectary where complete equipment is maintained for testing insecticides by the Peet-Grady method.

—— ♦ ——

A booklet on the possibilities of Devil's Shoestring as a source of rotenone and related insecticides has been issued by Dr. R. C. Roark of the Insecticide Division of the Bureau of Chemistry and Soils, Department of Agriculture, Washington, D. C.

—— ♦ ——

Lehn & Fink Products Co. earned net profit of $296,884 in the six months ended June 30, equal to 74c. a share on 400,000 shares of common stock. This compares with $314,540, or 76c. a share for the same period last year.

Reilly
COAL TAR PRODUCTS

FOR CONSTANCY OF QUALITY

CRESYLIC ACID
CRESOL
CRESOL U.S.P.
XYLENOL
TAR ACID OILS
NAPHTHALENE

For the Soap and Disinfectant Industry

12 *Convenient Plants*

REILLY
TAR & CHEMICAL CORPORATION
MERCHANTS BANK BUILDING · · · INDIANAPOLIS, IND.
2513 SO. DAMEN AVENUE, CHICAGO, ILL. — 500 FIFTH AVENUE, NEW YORK, N. Y.
SEATTLE, WASH. • PROVO, UTAH • MINNEAPOLIS, MINN. • CHICAGO, ILL. • GRANITE CITY, ILL. • INDIANAPOLIS, IND. • DOVER, OHIO • FAIRMONT, W. VA. • NEWARK, N. J. • NORFOLK, VA. • CHATTANOOGA, TENN. • MOBILE, ALA.

STANDARDS CHANGE

with Progress

¶ Progress and change go hand in hand. ¶ The old muzzle-loading flint-lock has become a museum curio. ¶ Colors from barks and roots and herbs have been supplanted by a wide range of brilliant. light-fast, synthetic dyes giving shades and colors never obtainable with natural products. ¶ Slow-drying, short-lived varnishes for automobile finishes have been replaced by modern long-lived, quick-drying lacquers and synthetic resin finishes. ¶ And now in the insecticide field, LETHANE 384 has been developed. ¶ More rapid in its action, more uniform in quality, more stable in storage, it has set a new high standard for insecticides.

"Be not the last to cast the old aside"

RÖHM & HAAS CO., INC.

222 West Washington Square **Philadelphia, Pa.**

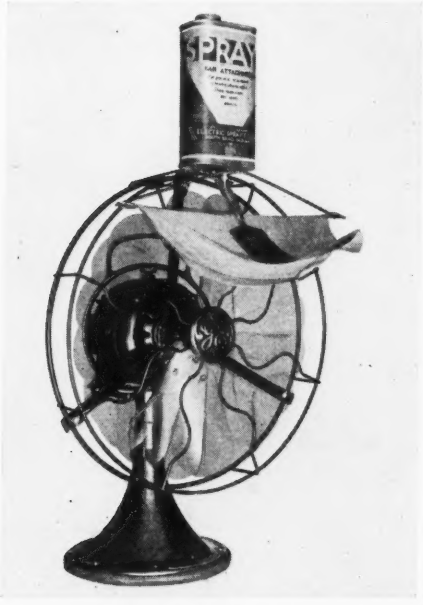
Chiefton Mfg. Co., Baltimore, leather polishes, is building an addition to its plant which will increase capacity about 25%.

Apex Chemical & Exterminating Co., formerly located at 13017 Triskett Road, Cleveland, has moved to 13231 Detroit Ave.

Ferdinand Gutmann & Co., Brooklyn, have announced to the trade that the United States Patent Office have granted them U. S. Patents, No. 1,916,977 and No. 1,966,273, which fully cover every type of "FILMA-SEAL." They claim the seal to be the tightest ever offered and that one style, Type J—is a complete guard against the counterfeiting of packages.

Exports of household insecticides from United States during June, 1934, totaled 42,298 lbs., worth $14,508. Experts of disinfectants, deodorants, germicides, etc., totaled 154,237 lbs., valued at $17,232.

A new device for attachment to an ordinary electric fan for the dissemination of insecticides, deodorants, etc., is now being marketed by the Electric Sprayit Co. of South Bend, Ind. The device is designed primarily for use with a standard liquid insecticide for dispersing minute quantities of the product constantly into the air of a room to repel and control insects. The device can



also be used with liquid deodorants, perfumes, theatre sprays, etc. The amount dispersed can be controlled and extremely small quantities of insecticide can be used if desired. A very fine degree of atomization is reported obtained. The device is being offered primarily for use in restaurants, stores, dairies, hotels, institutions, and offices.

DISINFECTANTS
Coal-Tar
Pine Oil
Cresol

Get Ready for Fall Business . . . .
with a new line of

FLOOR MAINTENANCE MATERIALS

Our line is especially for the jobber who wants high quality products at competitive prices.

Lusterize—A water-emulsion wax which dries hard and glossy without rubbing. Waterproof, odorless, and conforming to all specifications.

All Brite—A high-grade neutral floor soap made especially for cleaning linoleum, rubber and asphalt tile.

Supersan Pine Floor Soap—For general floor scrubbing on terrazzo, tile, wood, and other types where a stronger cleansing action is desired.

Supersan Liquid Polishing Wax—Gives harder and glossier finishes than you have seen heretofore.

Let us send you samples and full information

CHEMICAL COMPOUNDING CORPORATION

262 Huron St., Brooklyn, N. Y.

SHERWOOD'S
DI-BUG
KILLS

DI-BUG PYRETHRUM EXTRACTS NO. 20 AND NO. 5 have exceptionally high killing power.

DI-BUG STEAM-O-CIDE is especially effective in steam and electric sprayers.

DI-BUG CATTLE SPRAYS
Effective and protective.

DI-BUG INSECTICIDE
Unperfumed and perfumed.
(Sold in bulk to jobbers only)

DI-BUG PYRETHRUM FLOWERS, Whole, Granular, Fine Powdered.

ALL PYRETHRUM PRODUCTS TESTED BY PEET-GRADY METHOD

DI-BUG SPRAYSENE
A petroleum oil refined to practically complete freedom from kerosene odor.

SHERWOOD
PETROLEUM COMPANY, INC.

Bush Terminal - - - Brooklyn, N. Y.

BRANCHES

Chicago, Ill. — Memphis, Tenn.
Detroit, Mich. — Atlanta, Ga.
Boston, Mass. — New Orleans, La.
Philadelphia, Pa. — Birmingham, Ala.

REFINERY—WARREN, PA.

HERE IT IS!

AUTOMATIC — SAFE — TROUBLE FREE
FINEST CONTROLLED ATOMIZATION
WITH THE NEW

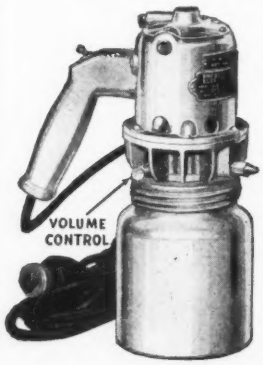
TORNADO ELECTRIC SPRAYER

MODEL 54

Here is the new sprayer you've been looking for. It features an automatic time switch set at any point from 1 to 45 minutes — sprays desired amount without any attention whatever — automatically shuts off. Can also be used for hand spraying. Adjustable nozzle can be set for spraying in any position. Also exclusive volume control adjustment permits spraying one ounce every two to four minutes with either fine or heavy spray. Don't fail to get the facts on this new type sprayer before buying.

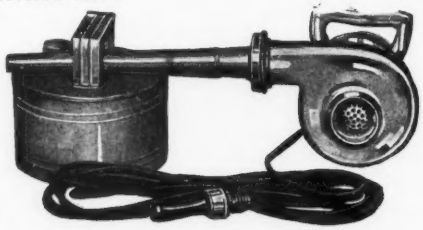
ADJUSTABLE NOZZLE SPRAYS IN ANY POSITION
TIME SWITCH OPERATES 1 TO 45 MINUTES AUTOMATIC SHUT OFF
VOLUME CONTROL FINEST DIFFUSING WITH WARM AIR
1 QUART CONTAINER

Also Most Complete Line of Electric Sprayers to Enable You to Meet Every Spraying Problem



Model 53 new Compressor Type unit with new adjustable volume control. Will break insecticide into *finest* mist and gas formation mechanically obtainable. Floats throughout spraying area for many minutes—a truly de luxe model! 1/8 H.P. G.E. Universal Motor. 1 quart metal container. 20′ of rubber covered cable.

Model 50 Fan Type unit. A fine insecticide atomizer. Sprays distance of 8′ to 10′. 1/8 H.P. G.E. Universal Motor, 1 pint glass jar. 20′ of rubber covered cable.



Model 6 Fan Type unit. Will break insecticide into a very fine mist. Sprays 18′ to 20′. 1/3 H.P. G.E. Universal Motor. Norma Ball Bearings, 1 gallon metal container. This model is for larger institutions, warehouses, industrials, etc., and is also highly recommended for moth-proofing solutions. Write today for complete description and circulars.

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The toxicity of insecticides containing a mineral oil distillate and the active principles of pyrethrum flowers is stabilized by adding a substituted aryl compound in which at least one hydrogen atom of the aromatic nucleus is replaced by an amino, a hydroxyl, or an alkyl radicle. The Shell Development Company, Canadian Patent No. 343,209.

CHANGES IN PEET-GRADY METHOD

(*From Page* 85)

The writer was present at a Standardization meeting some three or four years ago at which time the possibility of using benzophenone was offered. This apparently did not meet with any appreciable approval as there seems to have been nothing done about it since. More recently, it was suggested that pure Lethane be used but it was found that the production of absolutely pure Lethane was not practical. The writer has carried on some work with pure recrystallized benzonphenone dissolved in a highly refined deodorized water white oil on the basis of 5.5 grams of benzophenone to 100 cc. of base oil. This seems to offer a combination which duplicates very closely a composite sample of the best of the household insecticides now being offered. Results obtained with a complete test on this material against a composite of commercial fly sprays shows that both the paralysis effects and final

Samples — A 5.5% benzophenone in deodorized water white oil.

Date 8/6/34 — Fly Test Complete Day 1 N. Flies — Temp. 80 Humidity 60 Fly Age 3 days — Air Pres. 15-1/2 Sprayer DeVilbiss Special Room Peet-Grady

No. Fl. Caged	Not Down 10 min. No.	Not Down 10 min. %	Total Used	Dead 24 Hours No.	Dead 24 Hours %	Dead and Moribund 24 hours No.	Dead and Moribund 24 hours %	Down 2 Min. No.	Down 2 Min. %	Down 5 Min. No.	Down 5 Min. %	Down Min. No.	Down Min. %	Cage No.	Time Run	C.C. Used
60	20	33	80	29	92	37	62			60	45			1		5
124	15	10	157	78	87	106	79	83	48	117	88			2		10
111	3	3	114	82	72	100	88	70	61	102	80			3		15
67	20	23	87	26	29	55	60			55	60			4		5
79	6	7	85	56	66	66	80	60	69	63	74			5		10
95	3	3	95	70	73	83	86	50	52	86	90			6		15
72	40	36	112	22	20	50	27			62	39			1		5
113	6	5	118	59	50	94	75	72	61	108	92			2		10
98	2	2	100	66	66	85	85	80	80	94	94			3		15
80	15	19	95	20	21	30	34			60	63			4		5
82	5	6	87	38	44	80	57	42	48	78	90			5		10
117	4	3	121	74	61	96	81	66	54	113	93			6		15

Sample A — Sample B

Caged 24 hrs. for recovery
Flat Bottom, Open Cages

Test Method Liberals 4 Sprays
Exposure Time 10 min.

kill are very comparable to the ordinary household type insecticide. The cost of this material, of course, is too great to be used in preparing commercial insecticides but for use as a laboratory standard, it is not prohibitive. The danger of using this material, as far as the operator is concerned, seems to be very slight if ordinary caution is used not to work in it any more than is necessary.

Benzophenone is commonly used in perfumes, soaps and other similar materials and while the writer has not found actual pharmacological reports, it would seem that little need be feared from this angle. A minor objection that is certain to be raised to this standard is the fact that a water white must be used as a diluent. However, it has been our experience that a deodorized type of water white is the most uniform diluent of petroleum origin which it is possible to obtain. The writer has run this test several times using three different sources of deodorized water white as a diluent and practically no difference in

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Galvez 2171

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killing power could be detected. There are two or three well-known and standard deodorized water whites on the market and it is felt that the selection of one of these as a standard would be absolutely satisfactory.

It is therefore suggested at this time, with the hopes that other laboratories might do some work with it, and if this or any other pure chemical shows satisfactory results, the writer hopes that such a standard may be set up as a check sample, replacing the present arbitrary 60 or 65 per cent minimum kill. The actual concentration of benzophenone or other chemical in oil may readily be determined to meet a satisfactory specification by a series of cooperative tests by the members of the Standardization Committee and others interested.

Tables 5 and 6 show the results obtained with the use of benzophenone in deodorized water white as against a composite mixture of the better known commercial fly sprays. Graph No. 5, based on speed of paralysis, shows that the general action of the benzophenone-oil combination is essentially the same as the pyrethrum-oil fly sprays and the 5.5 per cent dilution practically duplicates the best household sprays. In graph No. 6 showing dead and moribund, the results for the actual dead are somewhat higher for the benzophenone-oil mixture but with the dead and moribund results, the two samples practically parallel each other, reaching a final kill of approximately 80 per cent of the 15 cc. dosage.

Judging from these results, as well as others of a more preliminary nature, it seems entirely possible that a combination of this nature would supply us with a satisfactory standard and it is hoped that other laboratories will check these results, and if they are corroborated, we may then be able to set up some logical and satisfactory official standard.

Another objection to the present official testing method is the trend of many household insecticides toward the use of derris extractives. Results using the dead figure as a basis of comparison in 24 hours are not satisfactory for insecticides using such derris extractives as rotenone and allied compounds. As pointed out in Dr. F. L. Campbell's recent paper in the March issue of **Soap**, it is necessary to hold treated flies at least 48 hours or longer in order to obtain proper indications of kill. The 24-hour reading does not give this indication if only dead flies are used as a criterion of strength. It would be rather inconvenient to hold a large series of recovery cages more than 24 hours and for this reason the writer has attempted to set up some basis of separation whereby proper indications on derris insecticides may be obtained in the 24-hour period. Treated flies have been set aside for 48 hours or more with readings taken at the end of 24, 48 and any longer periods desired. In every case all flies that were moribund in 24 hours were still moribund or dead at the 48-hour reading and eventually all of them died, with no indications of recovery.

Because of these results, the writer is grouping all moribund flies with actual dead in 24 hours whenever using insecticides containing derris extracts. It is, therefore, unnecessary to hold such flies more than the usual 24 hours. It would be necessary, of course, to set up some rather definite basis for separating moribund and active flies so that each laboratory separates the treated flies in the same way. The type of recovery cage will somewhat affect this separation but using an open type case, as is shown in the picture at the end of this paper, the writer separates moribund and active flies by including as moribund all flies that are alive and able to crawl but are unable to actually fly from the recovery cage. The flies are, of course, taken out of the cage at the time they are counted, and if by any chance one of them flies away during this transfer, it is counted as an active fly.

This makes a rather definite separation point and one which could be readily used by any laboratory. If it is decided to retain the closed recovery cage, it might also be necessary to change this designation slightly but that may readily be worked cut as desired. The dead and moribund results are kept separately as far as records are

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concerned, just as a matter of indicating the rate of actual kill for each insecticide, but as far as actually judging the sample is concerned, they are finally included as one indicator.

In considering the proper type of recovery cage, we have tried both types of cages and have found that the open type cage allows any partially treated flies to recover and escape from the cage during the 24-hour period and the results of numerous tests gave us slightly higher kills for the closed type cage, as recommended, even though food is included in the closed cage. We feel, however, that under normal field conditions the flies are not enclosed and there is, therefore, no reason for caging them in the laboratory. The open type cage more nearly resembles the conditions in the field and probably gives a truer picture of what the customer might see when the material is in actual use.

The cage used is a round, very heavy copper screen cage open at the top, about six inches in diameter and seven to eight inches in height. These are shown on the top shelf in the photograph at the end of this paper. If a fly becomes active enough after it is placed in this cage, it can escape and the writer feels that if it is able to escape over a six or eight-inch vertical wall, it has certainly not been treated sufficiently to satisfy the customer. This type of cage also eliminates much unnecessary time and labor in adding food and removing flies, as is done in closed cages.

Aside from the points of changes already discussed, there are other minor changes that might be made. There has been considerable discussion over the matter of including paper on the floor of the chamber during the test period. The writer has run a number of tests with and without paper and the results agree with those of Dr. Peet and others to show that the results are usually about 10 to 15 per cent greater when paper is omitted. It seems to the writer, however, that the use of paper much more nearly represents the conditions that exist in the field because most people use rugs or other similar floor coverings which would absorb the excess spray material in somewhat the same manner as paper. In the case of kitchens and bathrooms, there may not, of course, be any floor covering other than a smooth floor or linoleum but inasmuch as the results under these conditions would be more, rather than less, satisfactory, it would make no difference to the consumer. Because of these conditions, the writer feels that laboratory tests should as nearly as possible meet field conditions and in all tests except those where the actual official method must be used, paper is included.

The official method also still includes the use of horse manure as a breeding material for the flies and yet, as far as the writer can determine, none of the larger testing laboratories are using this breeding medium. Some are using one mixture and some another, with the majority apparently using the Richardson formula as published in "Science" some time ago. As far as the writer is concerned, horse manure has never been used for breeding purposes because of the difficulty of locating satisfactory sources of supply. Various mixtures have been tried, including one very similar to the Richardson formula but all of them have some disadvantages. The use of alfalfa meal is somewhat unsatisfactory because of the variation in material. Sometimes it runs largely to leaf meal very finely ground and the next lot may run mainly to stems and very coarsely ground. It may be possible to buy a uniform supply but the writer was unable to do so through the local feed stores. It also is somewhat more expensive than other materials and tends to breed large numbers of very small black flies as a by-product.

We finally arrived at a breeding media of bran, plus powdered skim milk, and have been using this for the past three years or more with entirely satisfactory results in number of flies produced, size and resistance. This makes a very cheap breeding material, is easy to obtain and its only objection is the fact that it does create a decided odor in the breeding room which may be too ob-

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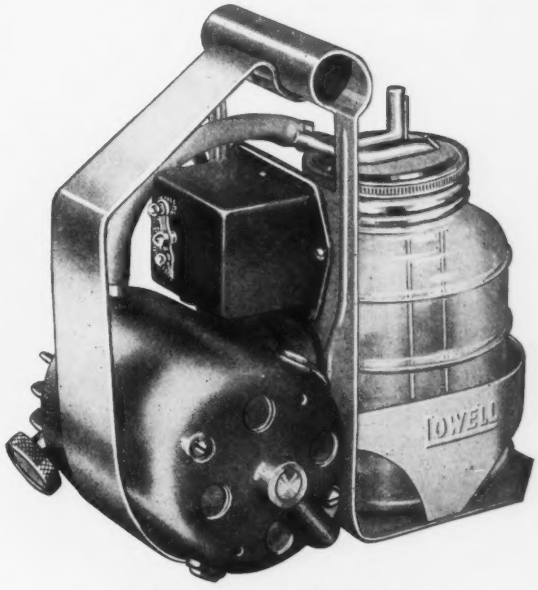

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jectionable in some locations. This mixture is used on the basis of approximately four parts of bran, two parts of powdered skim milk and two to three parts of water, depending on the type of cover used over the breeding jars. If several layers of cheesecloth are used, less water must be added to the mixture.

It seems that the choice of formulas used for breeding purposes is comparatively unimportant. The main factor in breeding satisfactory flies is to keep the actual number of fly larvae down to a moderately small number per jar, and insure an adequate food supply during the first three or four days after they hatch from the egg. This plus proper moisture conditions seems to control the final adult fly both in size and resistance. Some change should certainly be made in the official code method as long as practically all of the laboratories are using other materials than those called for.

In conclusion, it might be well to sum up some of the advantages and disadvantages of these changes in procedure.

Advantages

1. These changes give a more complete picture of the speed of paralysis, indicating quite definitely what the customer will see in the field depending on whether they spray small, normal or excessive amounts of insecticide.

2. The more detailed test eliminates the possibility of having to re-run samples because of weak or strong flies that might throw the results of a single dosage above or below the median lethal kill desired.

3. It shows without any degree of doubt the actual intrinsic difference between two samples, both in the paralytic action and final kill.

4. The inclusion of both dead and moribund as a final result in the 24-hour reading allows for the comparison of products containing derris as well as those containing only pyrethrum.

5. By setting up a standard satisfactory under average conditions, it is unnecessary to wait for satisfactory flies in carrying on test work. It eliminates the necessity of setting up an arbitrary minimum kill which at best means nothing except an argument with the possible purchaser.

Disadvantages

1. It requires more time to run, thus reducing the number of samples that can be handled in one chamber.

2. It requires the breeding of a greater number of insects.

3. It does not necessarily give a final kill figure that can be used for sales propaganda unless the flies have been carefully checked against a standard of known strength.

Summary

Major additions or changes to the official testing method:

1. The adoption of more than one dosage per sample in order to obtain a kill of approximately 50 per cent regardless of sample strength or fly resistance.

2. The adoption of a standard check sample to replace the arbitrary 60 per cent minimum kill.

3. Inclusion of moribund with dead flies in 24 hours to make the method satisfactory for insecticides containing rotenone or derris extractives.

4. The addition of paralysis or knock-down readings during the 10-minute exposure time to show speed of paralytic action.

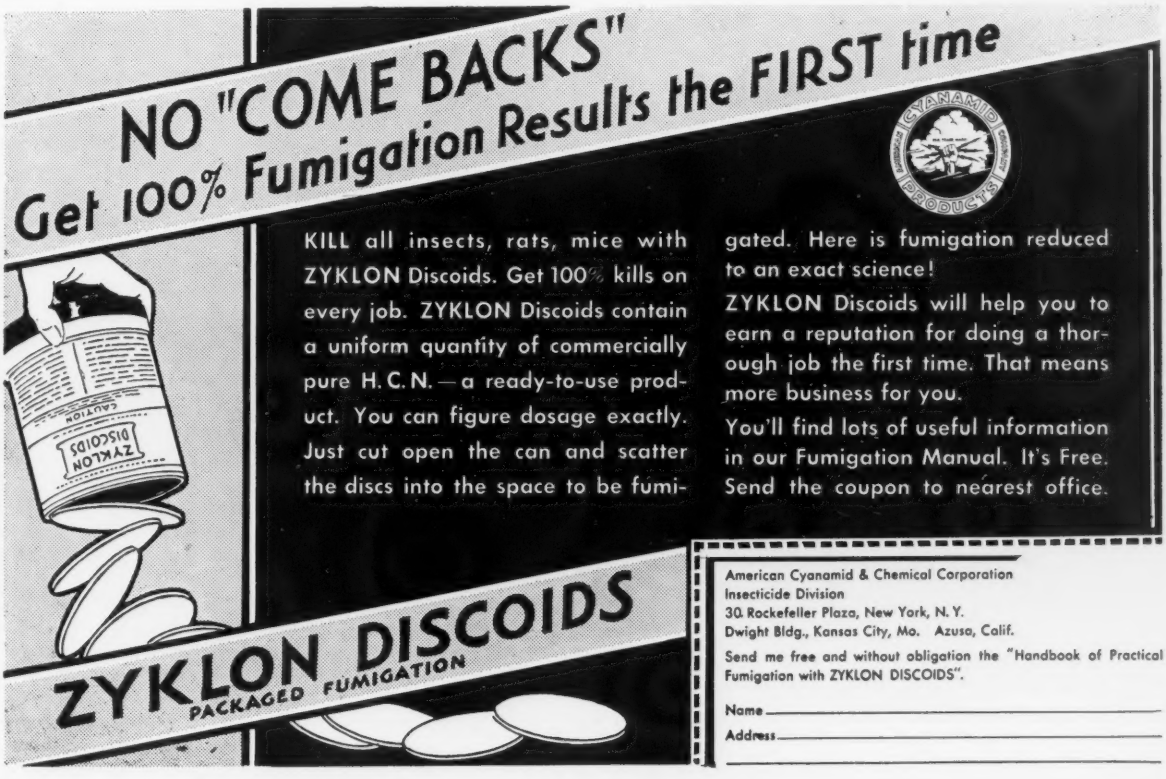
Minor changes:

1. The use of paper on the floor of the testing chamber.

2. Open type recovery cages in place of the closed type.

3. The adoption of a standard breeding media to replace manure.

4. Replacement of one observation window with the type suggested.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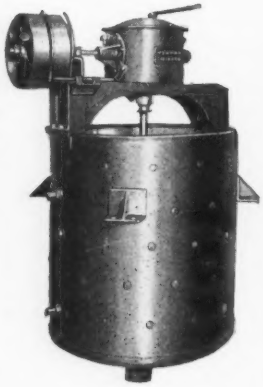

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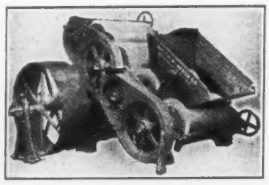

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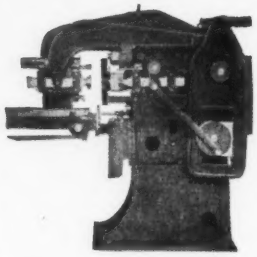

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Note: All advertisements must be in publisher's hands by the first of the month for that month's issue.

Positions Wanted

Soap Salesman, 29, thoroughly experienced package soaps, soap powders and cleansers—to contact retail and chain grocers. Metropolitan area; salary. Address Box No. 403, care *Soap*.

Plant Superintendent, Chemical Engineer—Has thorough knowledge and wide experience in the manufacture and production of boiled and cold made soap on large scale. Address Box No. 406, care *Soap*.

Competent Soapmaker—with many years experience in all sorts of soap manufacturing, looking for kettleman position in larger soap factory. Address Box No. 397, care *Soap*.

Chemist—College graduate with B. S. degree in Chemistry, wishes job as an assistant to soap manufacturer to learn the practical side. Experienced in laboratory work with liquid and soft soaps, waxes, disinfectants, etc. Address Box No. 399, care *Soap*.

POSITIONS OPEN

Wanted—by moderate size Pacific Coast soap manufacturer a plant superintendent now or recently connected with a large soap manufacturer Party must be fully experienced in latest mechanical and technical procedure of toilet and laundry bar soaps; granulated and powder; crude glycerine; perfumes; chemical analysis of materials and products; supervision of plant personnel. Give complete information first letter; salary expected; recent photo if available. Address Box No. 400 care *Soap*.

A manufacturer who has been producing sanitary chemicals, janitor supplies and applances for 25 years, and manufacturing a very complete line, desires to obtain the services of someone who is qualified to assist in sales promotion. Applicant must not be more than 40 years old or less than 30. In

SOAP MACHINERY

Every item shipped from our shops at Newark, N. J., is thoroughly overhauled and rebuilt before shipment.

SPECIALS

1—Soap Chip Dryer, 1200 lb.
2—Dopp 650 gal. Steam Jacketed Kettles.
1—Dopp 1200 lb. Steam Jacketed Crutcher.
1—Hershey 1000 lb. Horizontal Jacketed Crutcher.
1—1000 lb. All Steel Soap Powder Mixer.
2—Holmes & Blanchard 24" and 36" 4 cage Disintegrators, for grinding soap powder—no screens, no plugging.

25—Soap Frames, 60"x45½"x14", with trucks.
6—Plodders, Houchin, Rutschman, 4", 4½" double screw, 6", 8", 10".
14—Filter Presses, 42"x42" to 12"x12".
8—Granite Mills, 3 and 4 roll, 12", 18" and 24".
15—Horizontal Mixers, Jacketed and Plain, 15 gal. to 1000 gal.

MISCELLANEOUS—Kettles, Mixers, Pony Mixers, Powder Fillers, Tube Fillers, Labelers, Soap Presses, Soap Wrappers, Tanks, Boilers, Pumps, etc.

Send for Latest Bulletin.

CONSOLIDATED
PRODUCTS COMPANY, INC.
15-21 Park Row, N. Y. C. BArclay 7—0600
We buy your idle Machinery—Single items or entire plants.

WARREN SOAP
Manufacturers of Specialty Soaps
Since 1868

Potash Oil Soaps
Emulsifying Agents
Solvent Soaps
Cleaning Compounds
Private Formulas
Industrial Soaps

Automobile Soaps
Liquid & Paste
Liquid Soaps
Soap Powders
Forresters' Soaps
To increase the spread and adherence of Insecticides

The Warren Soap Mfg. Co.
Incorporated
Kendall Square Bldg., Cambridge, Mass.

Vioflor

A CHEMICALLY SOUND, PERMANENT DEODORIZER

THIS product is a great help to manufacturers of insecticides, naphthas, waxes, polishes, and Paradichlorbenzene blocks.

It saves you 40% to 70% of your perfuming cost *without changing the odor effect you now have in your product.*

It takes only a few minutes to demonstrate this.

On every thousand dollars you now pay out for perfuming ingredients why not save $400.00 to $700.00?

Manufactured by
CREPIN & DOUMIN, Ltd., London, England

Sold in the United States and Canada by

JOHN POWELL & CO., Inc.
114 East 32nd Street :: New York, N. Y.

Olive Oil

Olive Oil Foots

Deliveries spot and future in barrels, tank cars, drums or tank wagons.

ESSENTIAL OILS

Lemon—Bergamot—Orange

LEGHORN TRADING CO.
INC.

155 East 44th St., New York

Phone: VAnderbilt 3—6361-2-3

ITALY—SPAIN—GREECE—TURKEY—AFRICA

SALES REPRESENTATIVE

WANTED

McLaughlin Gormley King Company of Minneapolis wishes to engage a salesman to handle sales of Pyrocide 20 and other pyrethrum products in Eastern and Mid-Western territory. Only applicants of unusual ability and experience considered.

replying, give complete detailed information or application will be ignored. Limited salary with additional income based on increased sales. All applications will be held in the strictest confidence. Address Box No. 395, care *Soap.* —

Wanted — Specialty Chemist and Compounder. Small plant in Pennsylvania wants soap man familiar with compounding sulfonated oils. State experience and salary expected. Address Box No. 405, care *Soap.*

Wanted—Alert young man for southern territory to sell a well-known line of disinfectants, liquid soaps, deodorizing cakes, shampoo bases, etc. Address Box No. 404, care *Soap.*

Salesman wanted—by about October 15th. Must be experienced and successful in Soap line and kindred chemicals as Soap Powder, Detergents, etc. Travel out of New Orleans for old established nationally known Chemical Corporation with plants and branch offices throughout the United States. Territory open Louisiana, Texas, Oklahoma, Arkansas and Mississippi. Position primarily for contacting with Jobbers and Distributors. Apply, stating age, experience, references, past connections and salary expected care of P. O. Box No. 332, Marrero, Louisiana.

Increase your SALES with
QUALITY
FLOOR WAXES

IN BULK
or packaged under
PRIVATE LABEL
MADE RIGHT
PACKED RIGHT
PRICED RIGHT

WINDSOR WAX CO.
50 Church St. New York, N. Y.
Factory: 611 Newark St., Hoboken, N. J.
Manufacturers of
WAX PRODUCTS EXCLUSIVELY
Send for
SAMPLES and QUOTATIONS

NRA MEMBER U.S. WE DO OUR PART
Reg. No. 6

That *extra power*
for
Perfume Disseminators

BOUQUET K.M.S.

makes an ideal product. A universally popular type, refreshing and powerful.

$3.00 the lb.

A sample and further suggestions for the asking.

COMPAGNIE PARENTO, Inc.
CROTON-ON-HUDSON, N. Y.
New York City Toronto
Los Angeles, California, Representative
R. F. EATON, 4803 Everett Ave.

for your paste products
A REMOVABLE HEAD DRUM

A Trageser removable head drum is the ideal container for any of your bulk paste products—auto soaps, soft soap bases, polishes, textile specialties, fats, greases, etc. The head comes off quickly and makes the container easy to handle.

Trageser drums are built to last. Send for new low prices on 30, 55 and 110 gallon sizes.

JOHN TRAGESER STEAM COPPER WORKS
Grand Avenue Maspeth, L. I., N. Y.
PUlaski 5—7700

JAPANESE PYRETHRUM MARKET

Is very close commercially, as well as geographically to Oakland. This proximity is a real advantage in obtaining selected flowers to use in

AN-FO BRAND

No. 20
CONCENTRATED PYRETHRUM EXTRACT
ISOLATION PROCESS

This works to your advantage where you use AN-FO No. 20 in manufacturing your fly spray. Better color, higher kill from fresh flowers. Standardized Peet-Grady—minimum kill; chemically, minimum 2.15 grams A and B Pyrethrins per 100 cc.

KILL - COLOR - ODOR
AN-FO MFG. COMPANY, OAKLAND, CALIF.

"FILMA-SEAL"
(the double seal of cap and film)

WE are pleased to announce the granting to us by the United States Patent Office the U. S. Letters Patents, No. 1,916,977 and No. 1,966,273 fully covering all types of "FILMA-SEAL".

FERDINAND GUTMANN & CO.
BROOKLYN, N. Y.
Established 1890
U. S. Patent & Pats. Pending—Trade Marks Reg.

We Manufacture

For The Trade ONLY

Liquid Soap Base
Auto Soaps
Potash Oil Soap
Shampoo
U.S.P. Cresol Compound
Coal Tar Disinfectants
Liquid Soap
Pine Oil Soap
U.S.P. Green Soap
Shampoo Base
Pine Oil Disinfectants
Insecticides

Ask for samples of these specialty bulk products

HARLEY SOAP CO.
2852 E. Pacific St. Philadelphia

TSP

Preferred for its colorless crystals of uniform size and sparkling appearance. Prompt deliveries made from convenient distributing points. Packed in 325-pound paper lined barrels. Also in kegs and bags.

BOWKER
CHEMICAL COMPANY
50 Church St., New York
BRANCHES
Baltimore, Md. Chicago, Ill.

Miscellaneous

For Sale—Para Block power press, complete with four dies. Excellent condition. Like new. Address Box No. 398, care *Soap.*

For Sale—24 acres underlaid with 12 ft. vein pumicite. Unequaled for cleanser quality. Nearest deposit to eastern markets. Trackage. 30 inches overburden. Address F. Gerwin, Stigler, Okla.

Wanted—To locate manufacturer of powder from which self-polishing liquid wax is made by addition of water. Understand product is made in California. Address Box No. 401, care *Soap.*

Obviate Guesswork—Have an accounting system installed; periodic financial statements submitted; tax work—write Bernard Schuster, 202 West 40th St., New York City. Phone LO. 5-6940.

Salesman with knowledge of soaps and cleaners selling for old established manufacturers. Give qualifications. Address Baum's Castorine Co., Rome, N. Y.

KOPPERS WHITE TAR
MOTH PROOFING PRODUCTS

Deodorizing
AND MOTHPROOFING
Blocks
PLAIN AND PERFUMED
MADE WITH NAPHTHALENE OR PARA BASE

NAPHTHALENE FLAKES, CHIPS, etc.
DISINFECTANTS EMULSION AND SOLUBLE TYPES
FLY SPRAYS HOUSEHOLD SPRAYS CATTLE SPRAYS

MEMBER
NATIONAL INSECTICIDE AND DISINFECTANT MFRS. ASSN. INC. 1914 INC.

THE WHITE TAR COMPANY
OF NEW JERSEY, INC.
PHONE KEARNY 2-3600
BELLEVILLE PIKE KEARNY, N. J.

COLORS

FAST GREEN FOR SOAP
FAST TO SOAP BY ANY PROCESS
Boiled
Half Boiled
Cold
Transparent or
Liquid
Proved for thirty years
W 710 BLUISH GREEN
W 709 OLIVE GREEN

A. C. DRURY & CO., INC.
International Merchants
Essential Oils—Waxes—Talc—Clay—Colors—Zinc Oxide, etc.
219 EAST NORTH WATER ST. CHICAGO

NEW AND REBUILT SOAP MACHINERY

We offer to the trade our NEW IMPROVED 600 and 1,200 lb. FRAMES, SLABBERS, CUTTING TABLES, FOOT PRESSES, etc. Send for details.

1—Automatic Power Para Block Press
2—Broughton Mixers, jacketed.
1—10A Blanchard Mill
4—Soap Presses, Foot and Power
6—Filter Presses, sizes 6" to 36"
6—Granite Stone Mills, 2, 3, and 4 rolls
1—Proctor Soap Chip Dryer, complete
1—Automatic Soap Press
4—Steel, 3 and 5-roll Mills
1—Jacketed Vertical Crutcher
2—1,500 lb. Horizontal Crutchers
20—1,200 lb. Frames

Cutting Tables, Slabbers, Kettles, Pumps, Tanks, Filter Presses, Wrapping Machines, Tube Fillers, Closers, Crimpers, Dry Powder Mixers, Pulverizers, Grinders, Amalgamators, Mixers, etc.

Send for Complete List (Bulletin No. 15)

WE BUY AND SELL FROM SINGLE ITEMS TO COMPLETE PLANTS.

STEIN-BRILL CORPORATION

183 VARICK STREET NEW YORK, N. Y.
Phone: WAlker 5-6892-3-4
Cable Address: "BRISTEN"

Where to buy

RAW MATERIALS AND EQUIPMENT

for the Manufacture of Soaps and Sanitary Products

NOTE: This is a classified list of the companies which advertise regularly in SOAP. It will aid you in locating advertisements of raw materials, bulk and private brand products, equipment, packaging materials, etc., in which you are particularly interested. Refer to the Index to Advertisements, on page 114, for page numbers. *"Say you saw it in SOAP."*

ALKALIES

American Cyanamid & Chemical Corp.
Columbia Alkali Co.
Dow Chemical Co.
Hooker Electrochemical Co.
Niagara Alkali Co.
Solvay Sales Corp.
Stauffer Chemical Co.
Jos. Turner & Co.
Warner Chemical Co.
Welch, Holme & Clark Co.

AROMATIC CHEMICALS

Budd Aromatic Chemical Co.
Compagnie Parento
Dodge & Olcott Co.
Dow Chemical Co.
P. R. Dreyer, Inc.
A. C. Drury & Co.
E. I. du Pont de Nemours & Co.
Felton Chemical Co.
Fritzsche Brothers, Inc.
Givaudan-Delawanna, Inc.
Magnus, Maybee & Reynard, Inc.
Monsanto Chemical Co.
Naugatuck Chemical Co.
Newport Chemical Works
Polak's Frutal Works
Solvay Sales Corp.
A. M. Todd Co.
Ungerer & Co.
Van Ameringen-Haebler, Inc.
Albert Verley, Inc.

BULK AND PRIVATE BRAND PRODUCTS

An-Fo Manufacturing Co.
Baird & McGuire, Inc.
Chemical Compounding Co.
Chemical Supply Co.
Clifton Chemical Co.
Davies-Young Soap Co.
Eagle Soap Corp.
Federal Varnish Co.
Fergusson Laboratories
Fuld Bros.
Harley Soap Co.
J. L. Hopkins & Co.
Hull Co.
Koppers Products Co.
Kranich Soap Co.
Lethelin Products Co.
New York Soap Corp.
Palmer Products
Philadelphia Quartz Co.
John Powell & Co.
Geo. A. Schmidt & Co.
Warren Soap Mfg. Co.
White Tar Co.
Windsor Wax Co.

CHEMICALS

American Cyanamid & Chemical Corp.
Bowker Chemical Co.
Columbia Alkali Co.
Dow Chemical Co.
E. I. du Pont de Nemours & Co.
General Chemical Co.
Grasselli Chemical Co.
Hooker Electrochemical Co.
Industrial Chemical Sales Co.
Mechling Bros. Chemical Co.
Monsanto Chemical Co.
Newport Chemical Works
Niagara Alkali Co.
Philadelphia Quartz Co.
Solvay Sales Corp.
Standard Silicate Co.
Stauffer Chemical Co.
Swann Chemical Co.
Jos. Turner & Co.
Victor Chemical Works
Warner Chemical Co.
Welch, Holme & Clark Co.

COAL TAR RAW MATERIALS

(Cresylic Acid, Tar Acid Oil, etc.)
American Cyanamid & Chemical Corp.
Baird & McGuire, Inc.
Barrett Co.
Koppers Products Co.
Monsanto Chemical Co.
Reilly Tar & Chemical Co.
White Tar Co.

CONTAINERS

Continental Can Co. (Tin Cans)
Maryland Glass Corp. (Bottles)
Metal Package Corp. (Tin Cans)
Owens-Illinois Glass Co. (Bottles)
S. R. Redshaw Co. (Moth Cake Holders)

DEODORIZING BLOCK HOLDERS

Clifton Chemical Co.
Eagle Soap Corp.
Fuld Bros.
Garnet Chemical Corp.
Palmer Products, Inc.

ESSENTIAL OILS

Budd Aromatic Chemical Co.
Compagnie Parento
Dodge & Olcott Co.
P. R. Dreyer Inc.
A. C. Drury & Co.
Fritzsche Brothers, Inc.
Leghorn Trading Co.
Magnus, Maybee & Reynard, Inc.
Polak's Frutal Works
A. M. Todd Co.
Ungerer & Co.
Van Ameringen-Haebler, Inc.
Albert Verley, Inc.

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Consulting Chemists and Engineers

Specializing in Soaps, Disinfectants, Insecticides, Polishes, Etc.

PEASE LABORATORIES, Inc.
Chemists, Bacteriologists, Sanitarians
39 West 38th Street
New York
Food, Drug and Cosmetic Problems—Compliance with Official Requirements—Meeting New and Anticipated Competitions with Improved and New Products

H. A. SEIL, Ph.D E. B. PUTT, Ph.C., B.Sc.
SEIL, PUTT & RUSBY, INC.
Analytical and Consulting Chemists
Specialists in the Analysis of Pyrethrum Flowers, Derris Root, Barbasco, or Cube Root—Their Concentrates and Finished Preparations
ESSENTIAL OILS SOAP
16 East 34th Street, New York, N. Y.

STILLWELL AND GLADDING, Inc.
Analytical and Consulting Chemists
Members Association of
Consulting Chemists and Chemical Engineers
130 Cedar Street New York City

LLOYD A. HALL
Analytical and Consulting Chemist Specializing in the analysis, development, investigation, and improvement of
Soaps, Disinfectants, Cosmetics, Drugs, Polishes and Sanitary Specialties.
Research—Consultation
1415 W. 37th Street Chicago, Ill.

KILLING
strength of Insecticides
by PEET GRADY METHOD
(Official I. & D. code method) and
PYRETHRINS in PYRETHRUM FLOWERS
(by Gnadinger's Method)
We raised and killed more than 1 million flies in the last 2 years
ILLINOIS CHEMICAL LABORATORIES, INC.
1164 WEST CERMAK ROAD CHICAGO, ILL.

CONSULTANTS
offering their services to manufacturers of soaps and sanitary specialties should apprise the industry of their facilities through this professional card department. SOAP reaches 2,200 manufacturers who need help of a professional nature.

Skinner & Sherman, Inc.
246 Stuart Street, Boston, Mass.
Bacteriologists and Chemists
Disinfectants tested for germicidal value or phenol coefficient by any of the recognized methods.
Research—Analyses—Tests

Entomological Testing Laboratories, Inc.
We offer you a medium for purchasing insecticides on an intelligent basis.
Entomological testing by the Peet-Grady method, and chemical examination of insecticides are available.
114 E. 32nd St. New York, N. Y.

TAUB LABORATORY
Harry Taub, *Director*
115 West 68th Street, New York City
Analytical and Consulting Chemists
Specializing in Antiseptics, Disinfectants, Insecticides and Cosmetics
Technical Formulae Developed
Phone TRafalgar 7-1733

In the slack period of the year you have time to cooperate with us in bringing your products up to date.

Foster D. Snell, Inc.
Chemists-:-Engineers
305 Washington St.,
Brooklyn, N. Y.

RAW MATERIAL AND EQUIPMENT GUIDE

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MACHINERY

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Anthony J. Fries (Soap Dies)
Houchin Machinery Co. (Soap Machinery)
Huber Machine Co. (Soap Machinery)
R. A. Jones & Co. (Automatic Soap Presses and Cartoning Machinery)
Proctor & Schwartz (Dryers)
C. G. Sargent's Sons Corp. (Dryers)
Stokes & Smith Co. (Packing Machinery)
Triangle Package Machinery Co. (Packaging Machinery)

MACHINERY, USED

Consolidated Products Co.
Newman Tallow & Soap Machinery Co.
Stein-Brill Co.

METAL CAPS

Anchor Cap & Closure Corp.
Ferdinand Gutmann & Co.

MISCELLANEOUS

Dobbins Mfg. Co. (Pails, Mop Wringers, etc.)
General Naval Stores Co. (Pine Oil-Rosin)
Hercules Powder Co. (Pine Oil and Rosin)
Industrial Chemical Sales Co. (Decol. carbon, Chalk)
Pylam Products Co. (Lathering Agent)
Rohm & Haas Co. (Insecticide Base)

OILS AND FATS

Industrial Chemical Sales Co.
Leghorn Trading Co.
Murray Oil Products Co.
Newman Tallow & Soap Machinery Co.,
Theobald Annual By-Products Refinery
Welch, Holme & Clark Co.

PARADICHLORBENZENE

Dow Chemical Co.
E. I. du Pont de Nemours & Co.
Hooker Electrochemical Co.
Monsanto Chemical Co.
Niagara Alkali Co.
Solvay Sales Corp.
Jos. Turner & Co.

PERFUMING COMPOUNDS

Budd Aromatic Chemical Co.
Compagnie Parento
Dodge & Olcott Co.
P. R. Dreyer, Inc.
A. C. Drury & Co.
Felton Chemical Corp.
Fritzsche Brothers, Inc.
Givaudan-Delawanna, Inc.
Magnus, Maybee & Reynard, Inc.
Polak's Frutal Works
Ungerer & Co.
Van Ameringen-Haebler, Inc.
Albert Verley, Inc.

PETROLEUM PRODUCTS

Anderson-Pritchard Oil Corp.
Sherwood Petroleum Co.
L. Sonneborn Sons.

PYRETHRUM AND DERRIS PRODUCTS

Insect Flowers and Powder, Pyrenthrum Extract, Derris Products

An-Fo Mfg. Co. (Extract)
W. Benkert & Co.
Derris, Inc.
J. L. Hopkins & Co.
McCormick & Co.
McLaughlin, Gormley, King Co.
S. B. Penick & Co.
John Powell & Co.
Sherwood Petroleum Co.
Cyrus Ward & Co.

SOAP COLORS

A. C. Drury & Co.
Fezandie & Sperrle
Interstate Color Co.
Pylam Products Co.

SOAP DISPENSERS

Clifton Chemical Co.
Eagle Soap Corp.
Fuld Bros.
Garnet Chemical Corp.
Palmer Products

SODIUM SILICATE

American Cyanamid & Chemicals Corp.
General Chemical Co.
Grasselli Chemical Co.
Mechling Bros. Chemical Co.
Philadelphia Quartz Co.
Standard Silicate Co.

SPRAYERS

Breuer Electric Mfg. Co.
Dobbins Mfg. Co.
Getz Exterminators
Hudson Mfg. Co.
Lowell Sprayer Co.

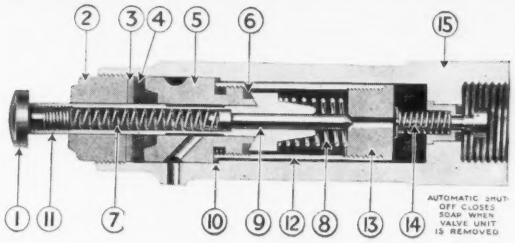
STEEL CONTAINERS

John Trageser Steam Copper Works (Pails and Drums)
Wilson & Bennett Mfg. Co. (Pails and Drums)

TRI SODIUM PHOSPHATE

American Cyanamid & Chemicals Corp.
Bowker Chemical Co.
General Chemical Co.
Grasselli Chemical Co.
Swann Chemical Co.
Victor Chemical Works
Warner Chemical Co.

PALMER SOAP VALVES



All parts of Palmer Valve Units are replaceable—for repairs or cleaning—all screwed together—no special tools needed. Palmer valves give long service—withstand highest pressures — conserve soap—prevent wasteful continuous flow of soap when valves are being operated. Equipped with automatic shut-off (optional) which permits valve removal for cleaning or repairs, yet automatically prevents flow of soap at unit without interfering with other valves on system. Study construction above.

1. Push Button
2. Front Bushing
3. Gasket Washer
4. Plunger Gasket
5. Spacer Bushing
6. Valve Gasket
7. Needle Valve Spring
8. Plunger Spring
9. Needle Valve
10. Shoulder Washer
11. Plunger
12. Unit Shell
13. Rear Bushing
14. Automatic Shut-off
15. Valve body, into which the valve unit is screwed.

Palmer PRODUCTS INC
WAUKESHA, WIS.
Adjacent to Milwaukee

We manufacture a complete line of janitor and sanitary supplies, including soap dispensing equipment of all kinds. Write for complete literature.

PYLA-ODORS

COLOR AND PERFUME IN A SINGLE OPERATION

BATH SALTS
LIQUID SOAPS
PARA BLOCKS
NAPHTHALENE

FAST COLORS
LASTING ODORS
MODERATE PRICES

▼ ▼

PYLAM PRODUCTS CO., Inc.

Mfg. Chemists, Importers, Exporters

799 GREENWICH STREET, NEW YORK CITY

CABLE ADDRESS PYLAMCO

F. & S.

Quality Colors
for
TOILET SOAPS
LIQUID SOAPS

TOILET PREPARATIONS

Long experience enables us to produce colors for all types of soaps.

If you have a shade you want matched send us a sample. We have complete facilities for matching.

Liquid soap colors a specialty—send for samples of F. & S. greens and ambers.

FEZANDIE & SPERRLE, Inc.
205 FULTON STREET
NEW YORK, N. Y.
Import—Manufacture—Export

LUXURIOUS COMFORT IN
BALTIMORE
MARYLAND
Stay at this fine hotel in the very heart of Baltimore where an eager desire to please awaits your every wish, where rooms are large and pleasant, where food is always superlatively good and where rates are surprisingly low
700 ROOMS
WITH BATH
from $3 a day
GARAGE ATTENDANT TAKES YOUR CAR AT THE DOOR
LORD BALTIMORE HOTEL

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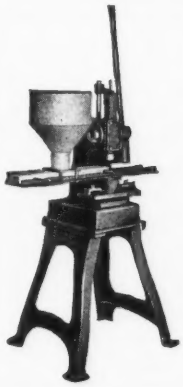

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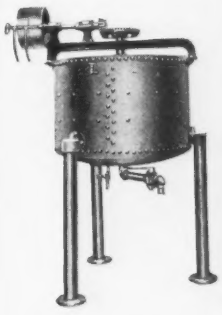

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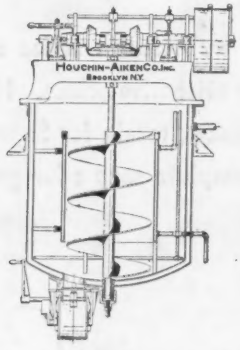

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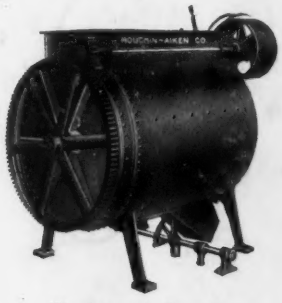
Section View Plunger
Type Valve



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Empire State
Press

Standard
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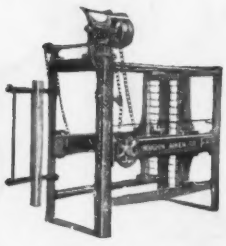

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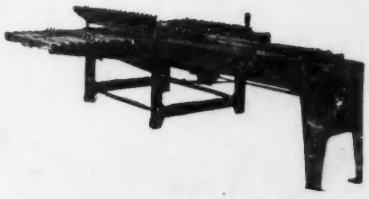

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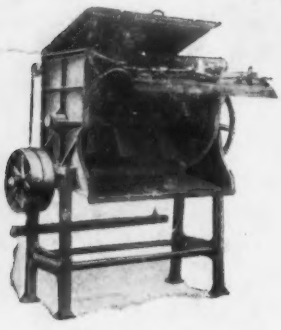

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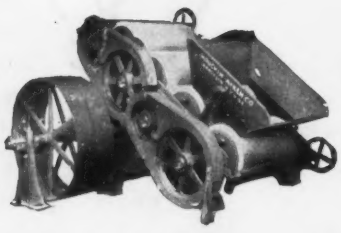

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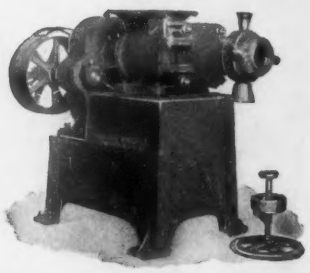

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